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SPECIAL REPORTS

ON

EDUCATIONAL SUBJECTS.

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VOLUME II.

OF THE UNITED STATES OF AMERICA.

PART 2.

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Ordered by Command of His Majesty.

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[Introductory Letter to Volumes 10 and 11 of the Series.]

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TO SIR GEORGE KEKEWICH, K.C.B.,

Secretary of the Board of Education.

SIR,

I HAVE the honour to present to you the accompanying volumes of Special Reports on various aspects of education in the United States of America.

For many reasons, and not least on account of the close relationship between the English-speaking peoples, American education has always been a subject of special interest to English students. Of recent years this interest has rapidly increased, and the educational methods and experiments in the United States are watched by many English teachers and students with a marked degree of sympathy and attention.

I desire to take this opportunity of thanking many of the chief educational authorities in the United States for their courtesy in supplying information for these volumes; and especially Dr. W. T. Harris, United States Commissioner of Education, not only for the warm welcome and wise guidance which he willingly gives to English students of education visiting America, but for the well-known series of reports issued under his direction. The latter are, in range of topics, in mass of information and in the liberality of their distribution, unrivalled in the world. My cordial thanks are also due to President Nicholas Murray Butler, of Columbia University, in the City of New York, for much valuable information, for help in the revision of some of the proofs, and for the assistance derived from the *Monographs on American Education* published under his editorship for the Paris Exhibition of 1900.

I beg leave also to express my thanks to Sir Joshua Fitch for his kindness in contributing an introductory paper to these volumes.

To each report is appended the name of its author, and it should be understood that the latter alone is responsible for the opinions therein expressed.

I am, Sir,

Your obedient Servant,

MICHAEL E. SADLER,

Director of Special Inquiries and Reports.

December, 1901.

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## THE CURRICULUM OF THE AMERICAN SECONDARY SCHOOL (HIGH SCHOOL).

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### I.

What a German lecturer recently said of childhood is pre-eminently true of education. It is the "ewiges noch nicht," never overtaking its ideals. It marches with society and finds no halting-place. While this is true of all educational development, one feels it especially when he turns his attention to the United States, where the very freedom of the schools from strong Government control and their nearness to the people heightens their social significance; for nowhere else are the reciprocal relations of home and school more clearly recognised and more strongly emphasised, and, as a consequence, nowhere else are educational aims so sensitive to changing ideals of life. This correspondence between educational and social tendencies which makes the American school so perfect an index and register of the people's wants and aspirations, should invest it with a peculiar interest for those who are at this time devoting themselves to the organisation of secondary education in England.

America rather than France or Germany is the most suggestive field of study for the English educational reformer. Not that secondary education in America is so skilfully and completely organised; not that there is such singleness of purpose and uniformity of means or high average of results as may be found on the continent of Europe; not, indeed, that America's present or prospective solution of the perplexing problem of secondary education would, at its best, satisfy England, for no system developed in one country can be successfully imported to another; but because America is, in tradition, inheritance, and the development of its institutions, more akin to England than are any of her Continental neighbours. In all that determines educational ideals,—in respect for individual liberty and individual rights, in the relation of the citizen to the State, and in notions of self-government the two people are, as might naturally be expected, very similar. The fact that there are, and always will be, superficial differences in method, or even striking variations in form, by no means invalidates the force of the comparison, since spirit and tendency are the same. Indeed, there can be no more interesting subject for sociological study than the variations caused by environment in the growth and development of institutions springing from the same root. A more open field, the absence of traditions, rapid growth, and special adaptation to peculiar conditions are responsible for most of the contrasts.\*

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\* The American is only the continuation of the English genius into new conditions more or less propitious.—*Emerson*.



An earlier-found faith in democracy, a bolder if less carefully considered experiment in popular government, forced the American people to anticipate the mother-country in the attempt to educate the masses; and, true to their inherited instincts, local rather than national influence has been the dominant force, so that there has not resulted that widespread uniformity which only a highly centralised system can give. The loss, if it be such, is more than outweighed by the greater flexibility and adaptability of the system evolved. The special needs of no community are necessarily disregarded. There is no attempt to subordinate the individual to an existing religious, social, or political régime. His resourcefulness, independence, and power of initiative are not impaired, but augmented. To the same cause—*i.e.*, local control—must be credited in large measure the education of public opinion which has kept pace with the development of the schools. A force ever operative and increasingly intelligent, it is frequently a severe critic, but none the less a firm ally, of the schools. It has shown a steadily growing appreciation of worthy educational ideals: until I would venture to say, to-day, less frequently than in England and Germany does one hear the utilitarian and "commercial supremacy" argument used as a plea for increased school facilities.

Decentralisation is also responsible for a wealth of educational experiments too costly to be undertaken on a national scale, but of quite inestimable value in determining safe lines of advance. Second only in importance to a discriminating knowledge of individuals, is the knowledge of educational values. To know something of the specific contributions made by different subjects is a prerequisite in determining courses of study, and such knowledge comes from experience only. Shall manual training and domestic science and stenography and typewriting be made a part of the secondary-school curriculum? Shall Latin or French or both be begun in the elementary schools? In physical science what shall be the ratio between qualitative and quantitative work? Shall elective studies be permitted or shall all studies be prescribed? These are practical questions in the American school world not to be answered dogmatically, but on the basis of experience furnished in the first instance by schools bold enough to depart from the prevailing practice.

It is this freedom to experiment, resulting in so many variations from the standard type, that makes it so difficult to generalise concerning American schools. In writing of the high-school curriculum, therefore one cannot hope to do more, in a short paper than follow the main lines of its development, and to discover, if possible, the prevailing tendencies, without attempting to do justice to so vast and intricate a subject.

## II.

The earliest examples of secondary schools were undoubtedly fitting schools for higher institutions. As such they possessed a definite aim and a simple and specific course of study, the perplexing questions of educational values and the correlation of

studies being entirely unknown. Not infrequently they were class schools, created by special endowment. The dominant influence was, from the first, the college admission requirement. All the boys, whether going to college or not, followed practically the same course, taking the staple subjects, Latin and mathematics, if not Greek, together with such few additional subjects as the master might have time to give. Later, when the non-college contingent became large enough to warrant separate consideration, partly out of deference to their demand for a more practical education, and partly, no doubt, from the desire to provide something less difficult for those who were either too dull or too indifferent to derive any benefit from the classics, other subjects, different in kind and more modern in spirit, were gradually added. Henceforth the development of the school curriculum was conditioned by the double necessity of meeting the wants of those treading the narrow but well-defined and well-tried road towards a liberal education and of those who by short cuts and unaccustomed ways were travelling directly towards their lifework.

Such, in general, has been the genesis and development of secondary education. In the case of the American high school, however, there is enough of difference to warrant us in tracing the development of its course of study somewhat more in detail. (Note 1.) In origin it is not primarily a *fitting* school for a higher institution, but a *continuation* school for those who have passed through the elementary schools and have proved their capacity for more advanced studies. (Note 2.) Preparation for college it may and does give, but from the first the majority of its students have not had this in view. (Note 3.) They have valued the high school for its own sake, as offering them opportunity to pursue further studies already begun and to take up new ones not taught in the elementary schools. This difference, as well as the weakness of academic tradition compared with the more immediate demands of breadwinning, the lack of fees and of such "capacity-catching" \*† devices as bursaries and scholarships

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Note 1.—These schools, established under enabling Acts passed by the individual States, are maintained and controlled by the local authorities of town or city. They are usually under the immediate direction of a school committee elected by the people. This committee appoints a superintendent of schools and the teachers of all grades, prescribes text-books, and settles all questions pertaining to the curriculum.

Note 2.—In some towns, boys and girls desiring to enter the high school must pass examinations set by the local authorities, represented either by the master of the high school or by the superintendent of schools; in others they are received on the certificate of the master of the Grammar School (i.e., of the grade of school above the primary, or below high-school).

Note 3.—Only about 14 per cent. of the pupils attending public high schools in America are looking towards college, and of these nearly half are preparing for college scientific courses.—*Report of the United States Commissioner of Education, 1896.*

\* Quoted by R. L. Morant in his paper on "The French System of Higher Primary Schools."

† This is true of high schools in general. In a few very rare instances, however, the high school is a lineal descendant of the ancient "grammar school," a preparatory school for college.

(for the high schools are as free as the elementary schools), profoundly influenced the course of study. Whereas the classical side, dominated by the college requirements, either stood still or experienced only gradual changes, the modern side of the school was developed with unprecedented rapidity, new subjects being added with more zeal than wisdom, since the teachers had not yet learned how to present them, and the number of pupils was too large and too ill-assorted to permit of a normal development. There followed a period of undetermined aims and superficial methods. It was but natural that the instruction in the old subjects, in which the teachers themselves had received their training, should be more thorough and systematic. It was not surprising, perhaps, that the English instruction should spend itself in fruitless grammatical drill or, at best, satisfy itself with biographical accounts of the standard authors with but incidental consideration of what they had written, that the natural sciences should be historical and descriptive rather than experimental; that history should be a mosaic of heterogeneous fragments; and that such of the modern languages as were attempted should be studied in exactly the same way, but for a more limited period, as were Latin and Greek.

As a consequence of inexperience, there was, therefore, a period of extremely crude experimentation on the modern side. The new curriculum, although apparently better adapted than the old to the immediate needs of those following it, was scrappy in the extreme and afforded but a poor substitute for the mental discipline which comes from the long-continued study of a few well-chosen subjects which the teachers have learned by experience to present with logical effectiveness. If the departure possessed any advantage, it consisted in the superior attractiveness of subjects so obviously related to present-day interests.

A second stage in the development of these schools was reached when substantial, continuous courses, coming from three to five times a week, and extending over several years, succeeded the scrappy courses which characterised the first use of the new material for educational purposes. Learning wisdom from experience, the teachers, with the aid of university specialists, formulated their ideas, worked out systematic courses, and demanded for them adequate time. Libraries and laboratories came to be regarded as an indispensable part of the equipment of every school. Manuals of literature, books of selections, minutely and excessively annotated texts—anything, in fact, which prevented direct recourse to literary masterpieces—were regarded with suspicion. The boy, it was said, must have time to drink deeply at the sources of inspiration. He must do more! He must, from daily practice in writing, acquire the power—that supreme test of culture—to use the mother-tongue with precision, fluency, and force. No course in natural science was deemed worthy of the name that did not provide for a reasonable amount of individual experimentation and require each boy to make in his laboratory note-book an independent record of the results he had obtained. The modern languages, which at first had been taught as a super-

cial accomplishment and on the modern side of the school only, began to be studied with the more serious purpose of serving a commercial end or of furnishing a tool for advanced work at college or technical school. (Note 4.) Advocates of manual training, stimulated into renewed activity by the exhibit of the Russian work at the Centennial Exposition of 1876, ambitiously proposed to connect the manual work of the elementary grades, which grows naturally out of the occupations of the kindergarten, with the shop work for educational purposes which had become a part of the curriculum of some of the higher technical schools. Not to be outdone by this consideration for the boys' interests, advocates of a more practical training for the girls proposed to develop the courses in plain sewing and cookery of the elementary schools into a substantial course in domestic science for pupils of secondary grade. And, finally—although this by no means exhausts the list of claimants for increased favour in the secondary school—history, instead of being a mere appeal to the memory, is, we are told, to train the judgment as well. Not merely fact-assimilation but fact-interpretation is to be its function, and no teachers have asked for more generous concessions in time than those who believe that history should be made a disciplinary subject. In this, as in several other instances, it is maintained that provision should be made not only for "perspective views and comprehensive surveys," but for the intensive study of limited portions of the field.\*

It will be noticed that all of these changes contemplate a sustained effort upon material systematically arranged and the employment of methods calculated to win from each subject whatever disciplinary value it possesses. In the minds of the reformers the old distinction between information and disciplinary subjects seems almost to have faded out, and differences in content, if not forgotten, are for the time minimised, that the new idea may receive the greater emphasis.

As a natural consequence of this special pleading and separate elaboration of the different subjects—a stage which was, no doubt, necessary for a full realisation of their educational values—the secondary school curriculum became hopelessly congested and chaotic. To correct this impossible state of affairs, a fairly successful effort has been made to shift a portion of the additional burden to the elementary school, and alternative courses have been multiplied in the secondary school.

But the development of the curriculum did not cease with the enrichment of the elementary school and the definition of courses. In many schools, a choice between subjects is offered as well, since each course has, in addition to a required minimum,

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Note 4.—There is still large room for improvement in the teaching of modern languages in American secondary schools. The aims, methods, and results of the American school suffer greatly from comparison with the best of German practice.

\* Report of the Committee of Ten.



certain supplementary electives. (Note 5.) The purpose of this arrangement is, that while the boy shall enjoy the privilege of exercising his choice, he shall be saved from the mistake of neglecting those subjects which, in the judgment of his teachers, constitute an indispensable part of a good general education. What, then, are these preferred subjects? They differ greatly in different schools, but it would be safe to say that English, a foreign language, a minimum of mathematics, at least one of the natural sciences, and history are usually included. In one well-known high school the only subjects prescribed are history, English and natural science, all the others being elective. In another, at a given point in the school, there is no specific limitation of a boy's choice other than that he must choose one study from each of several groups of subjects. This last school, however, is quite an exception to the prevailing type, although there seems a marked tendency in some localities to give a wider opportunity for choice in secondary schools by increasing the number of electives. A certain sort of specialisation is promoted by these as well as by the alternative courses, but no such intensive specialisation as that which enables an English boy at a certain point in his school life to devote all of his attention to one, or possibly two, kindred subjects is ever permitted in an American school. The idea of a unified course of study still generally prevails, and the class system, in accordance with which every boy is obliged to maintain a satisfactory standing in all the studies of a given year before being promoted to the next class, is, with some modifications, as much in vogue as it is in Germany. (Note 6.)

Note 5. In such cases there is usually a regulation to the effect that every boy must have a specific number of prepared lessons or exercises per week. This compels him to take one or more of the elective studies, but see Appendix III., 2.

Note 6. - Three methods of grading and promotion, rarely so distinct in practice, may be graphically represented as follows. -

	I.	II.	III.
Upper School.	Lat. Gk. Math. 3	Lat. Gk. Math.	Lat. Gk. Math. 5th year
	Lat. Gk. Math. 2	Lat. Gk. Math.	Lat. Gk. Math. 4th "
	Lat. Gk. Math. 1	Lat. Gk. Math.	Lat. Gk. Math. 3rd "
Lower School.	Lat. Gk. Math. 4	Lat. Gk. Math.	Lat. Gk. Math. 2nd "
	Lat. Gk. Math. 3	Lat. Gk. Math.	Lat. Gk. Math. 1st "
	Lat. Gk. Math. 2	Lat. Gk. Math.	
	Lat. Gk. Math. 1	Lat. Gk. Math.	

Average time of passing through  
Upper School 2 years.  
Lower School 3 years.



If asked to defend a system which apparently compels the superior boy to keep pace with the dullard, an American teacher might say, "The first duty of the school in a democratic State is to the boy of average ability. It is he that is dependent upon the aid which masters, books, systematic curriculum, and contact with his fellows can give. It is he that can be helped, transformed, as it were, from an ignorant to a skilled labourer in the social workshop, and the class to which he belongs must ever be the most numerous in a self-governing State. If, moreover, the school has any virtue as a social and a socialising institution, there is at least a presumption that the bright boy has something to learn from studying by the side of his less gifted classmate. However that may be, the first-rate intellect has in all ages been able to shift for itself, assimilating the knowledge and acquiring the power for leadership irrespective of school or schoolmasters, and it is not likely to forget the knack to-day, when there are so many extra school influences making for education and culture. It is the policy of the modern school to recognise these supplementary forces more and more, and it regards with something of distrust a system which, by narrowing a promising boy's interests and forcing him to the top of his endeavour to capture a scholarship, causes him to miss the advantages which such supplementary forces give. The wise teacher is ever ready by special supplementary assignments to keep the bright boys from marking time, and a curriculum which provides optional subjects permits, if it does not compel him to put forth his whole strength."

At a time when division of labour has become the law of our industrial and social life, and we must all to a degree at least be specialists whether we will or not, it would seem a mistake to make the only means whereby we may hope to escape its narrowing effects hasten rather than retard the process. A well-considered, composite course of study recognising the natural

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Note 6 (*continued*).—The enclosing rectangles indicate in what grades the boy may take the three sample subjects, Latin, Greek, and mathematics.

A boy in I. is regraded in all three subjects, moving forward more rapidly in Latin than in Greek, and in Greek than in mathematics. When he passes from the middle to the upper school, he finds a division in mathematics, his weakest subject, corresponding to some one of the divisions in the middle school and suited to his capacity.

A boy in II. is not regraded in any subject, but the grades are so slightly removed from one another that at promotion time he may pass up one, two, or more grades, according to his capacity. But, unlike the former boy, he must take all his work, at any one time, in divisions of the same grade.

The last statement is also true of III., where the grades denote distinct years, and the boy advances one step annually, with little hope of a double promotion, since the grades or classes are always a year apart. Plan III. promotes unity of curriculum, but it is the most mechanical of the three systems, and pays least regard to the special needs of the individual boy.

No. I., the most individualistic, is only workable with a large teaching force or with a comparatively simple, disjointed curriculum. It prevents correlation of subjects, and, under ordinary conditions, specialisation of teachers.

No. II., only possible in a large school and with an adequate staff, possesses most of the advantages of III., and, because of its greater elasticity, far more considerate of the individual.

No. III., the German plan, is the prevailing method in the American high school.



should not be forgotten that manual training as an element in general culture is making its way into schools farthest removed from manufacturing interests; and it is only fair to say that there is a spirit moving in the land superior to mere utilitarianism and more unerring than tradition or theory. (Note 8.) Every year witnesses the elevation of the popular ideals of education.

This much these schools may be said to have in common: first, they are all near the people; secondly, they have a modern curriculum; thirdly, a modern spirit pervades them. One needs not to be told that there are times when the first characteristic seems scarcely to be an advantage in a democratic community where everyone has an opinion and is free to express it. Captious criticism is not helpful, and may seriously interfere with the successful development of an educational scheme which requires time for its elaboration. But this is as nothing compared with the ultimate good that comes from the community's interest in its schools. They need to be "windswept" by public opinion—to borrow the expressive phrase of an English educator—if they are to be made to meet the greatest needs of the people. To say that they have a modern curriculum is not to say that they dispense with any valuable instrument of culture already in use, but that they are endeavouring besides to utilise the immediate environment, industrial, social and political, as well as physical, for culture purposes.\*

And they may justly claim to be modern in spirit when they recognise and cordially co-operate with the other modern social forces, the home, the library, the church, which are working towards the same ends. Only by the possession of these practical qualities can the high school be saved from producing an educated proletariat. The time may come when it will be deemed wise to attempt a more specific anticipation of breadwinning pursuits. The introduction of stenography and type-writing in some schools perhaps gives evidence of such a tendency. But here again is felt distrust of early specialisation, so that vocational aims are in the main subordinated to a sound general training along practical lines.

The statement is so common as to be almost trite that, judged by academic standards, the American schoolboy of secondary age suffers badly from comparison with the German boy. All that I have seen in Germany confirms the tradition. But it is not quite fair to leave the statement there. The American boy, from the free handling of certain subjects in school—*e.g.*, history

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Note 8.—In an address in Richmond, Va., February, 1894, Dr. W. T. Harris said, "There is no doubt that the high school course laid out by the school committees is more rational than the secondary course of the private preparatory schools prescribed for them by the colleges, and yet the college course was the conscious product of the highest educated minds of the community. The unconscious evolution by 'natural selection' in the minds of the school committees elected by the people was wiser on the whole. Individual members of the school boards are always found who oppose classical studies altogether, but the pressure of popular demands always prevails to secure in the public school what is needed."

\* See extracts from outlines of courses in physics, domestic science, and political science at the end of this paper.

and civics and from his less restricted social environment, gains so much more of independence and self-directive power, in the intellectual as well as the moral sphere, that it is not so easy to strike the balance and determine where the advantage lies. The views of Dr J. J. Findlay, who was chosen to report to the Royal Commission of 1895, upon American public schools, deserves to be quoted in this connection. —

"The American secondary education, no doubt, fails to create as many scholars as we find in Germany, but it does start an interest in culture; it trains boys and girls to self-support and activity, it brings them into contact with social and civic life, and it leaves them with a freedom of motion which enables them to find a sphere and occupation in life where the young man or woman trained in the German school is comparatively helpless." (Note 9.)

But the high school is not merely the last link in the public school system; it is also the connecting link with the college and university, and it would be a sad perversion of the facts if, in our efforts to recognise the changes wrought in these schools as a result of self-growth or by the direct impact of public opinion, we failed to do justice to the ever-present influence of higher and older institutions. The matriculation examination to these, although long limited in its scope, has, for such subjects as it included, always represented the norm, the academic pitch, as it were, to which the school courses are willingly or unwillingly keyed. Again, the staff of the high school is largely recruited from the graduates of the universities, and, although unfortunately this has not until quite recently meant for them the opportunity to acquire even the most rudimentary professional training, they have brought with them the atmosphere and traditions of scholarship. Moreover, the college preparatory course has generally attracted the most capable, if not the majority, of high school pupils, because it is the recognised road to a liberal education. These boys and girls, strong by natural endowment and steadied by a definite aim, have been a helpful stimulus to their mates; and, passing on to college, they have, by a natural reaction, very sensibly raised the tone of the school. Freedom of educational opportunity is indispensable in a democratic State, and it is the crowning glory of the high school that it is a public highway leading from the elementary schools to the university.

Besides this indirect general influence from above, credit must be given for many specific attempts made by the colleges to improve and raise the standard of the secondary schools. It is a singular fact that so obvious a duty should have been so long neglected. Even now there is in high places an inexcusable conservatism in recognising any responsibility whatever with

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Note 9. The following counter estimate of the German school from Dr E. Schlee, Rector of the Altona Real Gymnasium, is interesting. "The full scope of intellectual freedom which the German youth enjoys at school contrasts, so to speak the outward dependence on the government which in its surveillance, like Providence, surrounds the citizen as with a wall."

reference to elementary education. There are colleges which apparently consider that they are doing their whole duty in keeping lighted the lamp of ancient learning, whether it throws any ray on the path of the masses or not. Other more progressive institutions are doing pioneer service in the cause of public education. By offering a wider range of optional subjects for admission, through the suggestiveness of their matriculation examinations, by the establishment of pedagogical departments for their students, as well as by conferences and lectures for teachers already in the work, they are exerting a very marked, direct influence for the right solution of secondary school problems.

Despite this sympathetic attitude towards secondary education the matriculation examinations in some subjects are pitched too high to make it easy for the boy of average ability, during a secondary course of only four years, to meet the requirements. (Note 10.) Many higher technical schools, going to the other extreme in their desire to keep in touch with small rural high schools, have erred in making their examinations too easy. The English device of a comparatively simple pass examination, with subsequent recognition of more advanced work, a plan quite consistent with the tendency to increase electives in American schools, would be an improvement, if it did not foster the evil of too early and too narrow specialisation. The difficulty, however, lies too deep to be reached by any mere device. It springs from the failure to recognise the "compromise"\* character of the present classical curriculum and from the consequent unwillingness to make adequate concessions to the new subjects—the Uitlanders who have forced their way into the academic oligarchy.

The situation is still further complicated by causes which are purely local. The common schools were originally started with the purpose of furnishing only the most rudimentary English training. Much was made of arithmetic because of its practical value in business, but no provision was made for algebra and geometry, while Latin was regarded as quite beyond the scope of such schools. The nation far removed from alien peoples did not feel the need of learning modern languages for purposes of communication or trade. So when the high schools were established as continuation schools of secondary grade, in which these more advanced subjects should be taught, the idea was strengthened that the latter were essentially secondary in character, and that they should not be begun below the high

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Note 10.—The Master of an English preparatory school once said to me, "The scholarship boy sets the pace for my school and the rest keep up as best they can or fall by the wayside." I was reminded of a conversation with one of America's best known and most successful schoolmasters, in which he said, "There are eighteen members in my Latin class. I am giving daily lessons of such length and difficulty that all but four are floundering. I do it because I feel that I must to meet the college examinations."

\* See Mr. M. E. Sadler's "Problems in Prussian Secondary Education for Boys, with special reference to similar questions in England," page 207.



school, i.e., before fourteen or fifteen years of age. So deep seated was this prejudice that only by degrees have local authorities been able to rise above it. Now, however, elementary algebra and geometry, not to speak of more vitalising subjects—literature and art, history and natural science—have found a place in the primary schools, not merely in response to demands from above but as a natural growth from the kindergarten upwards. Some few school communities have gone farther and have introduced Latin and French or German, and with such happy results that their example is likely to find imitators. The misconception as to the secondary school period has had at least this fortunate result: The differentiation of courses comes late, and the choice of a career has been postponed until a safe age for making so important a decision, although the boy has not always, from his somewhat barren experience in the elementary school, gained sufficient knowledge of his powers to choose wisely.

It is an interesting fact that the changes referred to above, constituting for the most part a natural growth rather than a conscious imitation of foreign models, have brought the curricula of some American schools into striking resemblance to those of the German Reform Gymnasium, as will be seen from the comparison instituted at the end of this paper. (Appendix II.)

While a discussion of method is not within the scope of this article, no consideration of the curriculum would be complete which did not take account of two other marked tendencies in American schools at the present time. These are the extended use of supplementary material and the correlation of studies.\* The American teacher has been frequently reproached for too great dependence upon text books, and it cannot be denied that there is much force in the criticism. He does not, as a rule, anticipate and remove difficulties for his pupils to the same extent that the German teacher does. His rather limited professional training renders him less skilful in this particular. Perhaps his pupils are the more self-reliant in consequence. But one thing he does for them that a German teacher rarely does. He introduces them to books. He makes individual assignments, prepares lists of authorities, and sends his pupils to the town library, where they consult not one but many books. The habits of reading which this promotes and the familiarity with the resources of the library are of inestimable value for boys, who frequently leave school before completing their course, since it provides for a continuation of their education during their adult lives.

The other practice, that of recognising and emphasising the natural relations between subjects, making the instruction given in one help and enforce that given in another, while not so general as the above-mentioned tendency, is very much in the minds of American teachers at present, and is a potent factor in determining courses of study. One need not be deeply versed in the philosophy of Herbart to realise how advantageous and natural it is that the boy who in Latin is reading about Cæsar's

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\* See illustrative material at the end of the paper. (Appendix I.)

invasion of Britain shall be at the same time studying early English history; that when he is busy with the reigns of the Tudors he shall also be reading some of the masterpieces of the Golden Age of English literature; that the principles learned in the algebra and geometry class shall find immediate application in the physical laboratory and the workshop; in short, that cross references between all subjects shall be made whenever possible.

A still more important form of correlation is one to which most of the progress already described must be accredited—the articulation of school with school and of all with the University. It would be claiming too much to say that this is an accomplished fact, but it is an ever-present ideal, and there have been so many encouraging signs of sympathy among teachers of all grades of instruction that the time when the waste from unassociated effort shall cease, and when the advantages of co-operation shall be generally recognised, seems close at hand.

D. S. SANFORD.

Brookline High School, Massachusetts,  
August, 1899.

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## APPENDIX

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1. The first part of the report is devoted to a general survey of the situation in the country. It is a very interesting and valuable contribution to the knowledge of the country and its people.

### 2. THE SECOND PART

The second part of the report is devoted to a detailed description of the various districts of the country. It is a very interesting and valuable contribution to the knowledge of the country and its people.

The third part of the report is devoted to a detailed description of the various districts of the country. It is a very interesting and valuable contribution to the knowledge of the country and its people.

The fourth part of the report is devoted to a detailed description of the various districts of the country. It is a very interesting and valuable contribution to the knowledge of the country and its people.

The fifth part of the report is devoted to a detailed description of the various districts of the country. It is a very interesting and valuable contribution to the knowledge of the country and its people.

The sixth part of the report is devoted to a detailed description of the various districts of the country. It is a very interesting and valuable contribution to the knowledge of the country and its people.

The seventh part of the report is devoted to a detailed description of the various districts of the country. It is a very interesting and valuable contribution to the knowledge of the country and its people.

The eighth part of the report is devoted to a detailed description of the various districts of the country. It is a very interesting and valuable contribution to the knowledge of the country and its people.

The ninth part of the report is devoted to a detailed description of the various districts of the country. It is a very interesting and valuable contribution to the knowledge of the country and its people.

The tenth part of the report is devoted to a detailed description of the various districts of the country. It is a very interesting and valuable contribution to the knowledge of the country and its people.

The eleventh part of the report is devoted to a detailed description of the various districts of the country. It is a very interesting and valuable contribution to the knowledge of the country and its people.

The twelfth part of the report is devoted to a detailed description of the various districts of the country. It is a very interesting and valuable contribution to the knowledge of the country and its people.

Experiments with Albumen.

Dust.

Bacteria and Butter-making.

The Brookline Water Supply.

The System of Ventilation in the Brookline High School.

An Ideal Room.

## OUTLINE OF WORK IN PHYSICS.

There are two courses in Physics.

1. The so-called *Popular Course*, the fundamental aim of which is :—

- (a) To develop in the pupil the habit of steady, persistent, logical thinking ;
- (b) to render him fairly intelligent in reference to his own scientific environment ;
- (c) to beget a sense of power in his own ability to appreciate scientific truth and to draw legitimate conclusions from simple data ;
- (d) to teach him to apply the elements of Algebra and Geometry to the problems of daily life ; and finally
- (e) to arouse within him a deep sense of appreciation of all that modern science has done and is still doing for the comfort and convenience of the race.

The Master has substituted for a text-book a special manual, as yet in manuscript form, in which the student is told as little as possible directly, but is given, practically, a series of original exercises in Mechanics, Optics, and Electricity which he is to work out by the aid of a set of simple apparatus, his mathematical instincts, and his own brain, and apply in a continuous sequence suggested by an abundance of questions, problems, and references to the affairs of daily life.

The aim is to be thoroughly practical. In Hydraulics, for instance, more attention is paid to the water-meter, the simple motor, and the turbine than to the lifting pump, the ram and the breast-wheel, as the average man is more likely to see and use the former than the latter series. In Optics again, the camera, the opera glass, and the spy-glass are dealt with more fully than the telescope and the compound microscope for the same reason.

Continual reference is made to the current literature of the day and to the science of Boston and vicinity.

It is intended that a series of illustrated lectures shall accompany the course, giving a brief summary of the history of Physics and a glimpse of the wonderful scientific achievements of our own age.

Toward the close of the school year special topics are suggested for more exhaustive treatment than is possible in the regular class-room work. Each pupil is expected to choose one or more of such topics and to present an illustrated paper upon the subject selected, at the end of the year.

Among the topics recently suggested may be mentioned the following :—

1. Mechanics of the Clock.
2. Mechanics of the Bicycle.
3. Mechanics of the Sewing Machine.
4. Hughes' Induction Balance.
5. The Microphone.
6. Consumption of Gas, Water, and Electricity in the Household.
7. Testing a Water-meter.
8. The Fire-alarm System of Brookline.
9. School-room Ventilation.
10. The Long-Distance Telephone.
11. The Transformer.
12. The Gas-engine.
13. The Horse Power of an Electric Motor

The time is equally divided between laboratory and lecture-room work, each requiring two periods per week beside the usual preparation for a full study.

Complete notes are kept by the pupils of both the laboratory and the lecture-room.

2. *The Harvard Preparatory Course* designed for those who are intending to enter Harvard University, Radcliffe College, or the Lawrence Scientific School. This course is based upon Hall and Bergen's Text-book, *Physics*, and corresponds to what is known as Physics B in the Harvard Catalogue. The time one year, is equally divided as in the Popular Course between laboratory and lecture-room work, two study periods each, the preparation required for a full study being given to each study period. The course is required of all for whom it is intended. (See Catalogue.)

The Department is supplied with a well-equipped physical laboratory, and has reference to the special needs of the two courses above outlined, a lecture hall and a photometer room, and has the use of a lecture room provided with a stereopticon and such other appliances as are necessary for illustrating the various phases of a course in Practical Physics.

## POLITICAL SCIENCE.

### FIRST HALF YEAR. CIVIL GOVERNMENT.

The aim of the course is to study American institutions of government in the light of their origin, and to recall for the purposes of comparison what was learned in previous years of the government of Greece, Rome, and England.

Text books: Fiske, Martin, Macy.

For reference: Bryce, "The American Commonwealth."  
Hinsdale, "The American Government."  
Woodrow Wilson, "The State."  
Shaw, "Municipal Government in Great Britain."  
Shaw, "Municipal Government in Continental Europe."

#### I. THE TOWN.

(a) An historical sketch of Brookline.

(b) An intensive study of local conditions, taken up under the following heads: The town meeting, the executive officers of the town, the police system and police court, the street department, the poor relief system, the schools, the library, the fiscal system.

Statistical tables and diagrams, illustrating the growth of the town and the increase of expenditures in the different departments, prepared by the students.

Sources: The town reports of the current year and of former years; The Chronicle; "Guide to the Local History of Brookline"; Papers of the "Historical Publication Society"; "The History of a Favored Town"; A. D. Chandler's article in the New England Magazine; The Arena, April, 1898; "The Town Government," by J. M. Colman, Jr.

(c) The origin of the town. (Fiske and Macy.)

#### II. THE CITY.

Its government compared and contrasted with that of the town. Past and present instances of collective and representative assemblies. Brief consideration of the governments of a few typical cities; e.g., Quincy, Newton, Boston.

Defects and problems of American cities.

Foreign municipalities; e.g., Glasgow, Manchester, London (Shaw).

The ancient Greek city-state.

Brookline's future government—Possible compromises.

### III. THE COUNTY.

(a) Special attention given to the County of Norfolk. Its officers : their duties, term and method of selection. The shire town. County records. Brookline's proportion of County expenses.

(b) Brief general study of the county. Its origin. The New England county compared with that in the middle and southern states (Fiske, Macy, Hinsdale).

### IV. THE STATE GOVERNMENT.

The executive legislative and judicial departments of the State of Massachusetts (Manual of the General Court, Martin, Macy, Mass. Edition).

The state constitution briefly considered. The town's relation to the larger political areas. Counties, senatorial, councillor and congressional districts indicated on outline maps of the state.

### V. THE FEDERAL GOVERNMENT.

The executive, legislative and judicial departments. The national constitution carefully studied.

VI. SPECIAL TOPICS for intensive study, some of which are adapted for composition subjects :

1. The Caucus.
2. Party Organization, the machine and the political boss.
3. The Australian ballot system.
4. The Referendum.
5. Proportional Representation.
6. Comparison of Greek, Roman and English deliberative assemblies.
7. The Oriental, the Roman and the English method of nation building. (See Fiske, "Beginnings of New England," chap. 1.)
8. Comparison of English and American National Government.
9. Comparison of English and American Local Government.
10. The growth of Imperialism.
11. The Ideal Citizen.

### SECOND HALF YEAR.—POLITICAL ECONOMY.

The aim is to give an elementary course in economic theory, and, at the same time, to use for illustrative purposes the material collected during the three years which the pupils have studied history.

Current events also claim a large share of attention, and the attempt is made to give an unbiased view of important social and economic problems.

Text books : Walker's "First Lessons in Political Economy."

Fawcett's "Political Economy for Beginners."

For reference : Mill, Hadley, Bullock, Laughlin, MacVane, Gide, Ely, Perry, Andrew's Institutes of Economics, Jevons (Money and the Mechanism of Exchange).

I. A BRIEF SURVEY of English and American industrial and economic history (Ely, Bullock).

(Recall and review the history of the previous year.)

(a) The industrial revolution in England.

(b) The rapid increase of population and material development of the United States.

II. THE PRODUCTION AND EXCHANGE OF WEALTH.

III. THE DISTRIBUTION AND CONSUMPTION OF WEALTH.

IV. THE ECONOMIC FUNCTIONS OF GOVERNMENT.

The doctrine of *Laissez faire*.

Regulation of competition.

Government ownership.

Socialism.

V. SPECIAL ASSIGNMENTS FOR TERM THEMES, which require considerable research, are made to the individual members of the class, *e.g.* :

1. The Sweating System.
2. Factory legislation in Massachusetts.
3. The Massachusetts Consumers League.
4. Piece work : its advantages and dangers.
5. Women wage earners.
6. Co-operation.
7. The single tax.
8. The Clearing House.

Note books containing topical analyses, maps, and diagrams. Digests of books read and reports of lectures kept throughout the year.

Weekly debates before the school (Brookings and Ringwalt's Briefs for Debates).

## APPENDIX II.

### A COMPARISON BETWEEN AN AMERICAN AND GERMAN SCHOOL.

Comparison of the time-tables of the classical and semi-classical courses of the Brookline, Massachusetts, High School, with the last four years of the corresponding courses of the Reform Gymnasium and Real Gymnasium of Frankfort on Main :

#### CLASSICAL COURSE.

	D.		C.		B.		A.		Aggregate.	
	Brook- line.	Frank- fort.	Brook- line.	Frank- fort.	Brook- line.	Frank- fort.	Brook- line.	Frank- fort.	Brook- line.	Frank- fort.
Mother tongue	3	3	3	3	1	3	6	3	12	12
Latin	4	3	4	3	4	3	4	3	16	32
Greek	—	3	5	3	5	3	5	3	15	32
French	4	2	2	2	3	2	4	2	13	8
German or English	—	—	—	2	—	2	5	—	5	4
History	2.5	2	2.5	2	3	2	—	3	8	9
Mathematics	4	3	3	4	3	4	3	3	13	14
Physics	—	2	—	2	2	2	4	2	6	8

D represents the lowest class in the high school and the Unter-Secunda of the German School ; A, the last year of both schools.

The time devoted to Latin and French in the years preceding the last four is indicated herewith

	Frankfort.				Brookline.		
Latin	—	—	—	10 10	—	2	3
French	6	6	6	2 2	3	3	3

It is interesting to note that —

1. The time allotment in both schools for the mother tongue, German or English, history, mathematics, and physics, is surprisingly similar, although somewhat differently distributed.

2. Latin is begun in corresponding years, *i.e.*, in Unter-Tertia in Frankfort and in the second year preceding the high school in Brookline.

3. Greek is studied four years in Frankfort and only three years in Brookline.

4. French is begun two years earlier in Frankfort than in Brookline

But note how the American school suffers from the comparison when we consider the intensity with which the languages are studied. In Frankfort during the first two years in which Latin is studied it comes ten times a week ; in Brookline, during the corresponding period, three times a week. The aggregate of Latin periods for the last four years in the German school is thirty-two ; in the American school, only half as many. An aggregate of thirty-two periods of Greek is given in Frankfort ; of fifteen, in Brookline. In Frankfort, six periods per week are devoted to French, when it is begun ; in Brookline, only three. But during the last four years, the aggregate for French in the American school is thirteen ; in the German school, only eight.

The fact that the German boy commonly carries thirty lessons per week, while the American boy assumes only from fifteen to twenty, is of course an important consideration in making such comparisons, but they show none the less clearly the relative importance attached to language study. They also show how wise the Germans are in making a liberal allowance of time during the first years of language study.

## SEMI-CLASSICAL COURSE.

—	D.		C.		B.		A.		Aggregate.	
	Brook-line.	Frank-fort.	Brook-line.	Frank-fort.	Brook-line.	Frank-fort.	Brook-line.	Frank-fort.	Brook-line.	Frank-fort.
Mother Tongue .	3	3	3	3	1	3	5	3	12	12
Latin . . .	4	6	4	6	4	6	5	6	17	24
French . . .	4	3	2	3	3	3	4	3	13	12
German or English .	—	6	5	4	5	4	5	4	15	18
History . . .	2.5	3	2.5	3	3	3	3	3	11	12
Mathematics . .	4	4	3	5	3	5	3	5	13	19
Physics . . .	—	3	—	2	4	2	—	2	4	9
Chemistry . .	—	—	—	2	—	2	4	2	4	6

In this table the Germans give relatively more attention to mathematics, chemistry, and physics, but there is a closer correspondence between the two schools in the languages and history.

Comparison of the time-table of the semi-classical course of the Brookline, Massachusetts, High School, with the last four years of the corresponding course in the Real Gymnasium of Altona :—

—	D.		C.		B.		A.		Aggregate	
	Brook-line.	Al-tona.	Brook-line.	Al-tona.	Brook-line.	Al-tona.	Brook-line.	Al-tona.	Brook-line.	Al-tona.
Mother Tongue .	3	3	3	3	1	3	5	3	12	12
Latin . . .	4	5	4	5	4	5	5	5	17	20
French . . .	4	4	2	4	3	4	4	4	13	16
German or English .	—	3	5	3	5	3	5	3	15	12
History . . .	2.5	3	2.5	3	3	3	3	3	11	12
Mathematics . .	4	5	3	4	3	5	3	5	13	19
Physics . . .	—	2	—	3	4	2	—	2	4	9
Chemistry . .	—	—	—	2	—	2	4	2	4	6



Years preceding the last four :—

		Brookline			Altona						
French	- - - -	-	-	3	3	3	5	5	5	4	4
Latin	- - - -	-	-	-	2	3	-	-	-	5	6

The similarity in this case is even greater than in the previous instances.

### APPENDIX III.

#### SPECIMEN COURSES OF STUDY.

Which show a conservative and a progressive type of High School.

1. In the Lowell High School of San Francisco, California, there are two courses, of three years' duration : the Classical and the Latin Scientific course. In the first, all studies are prescribed, in the second, French or German may be substituted for Chemistry in the second year and for any subject in the third year.

##### CLASSICAL COURSE.

###### *First Year.*

English, 5.  
Latin, 5.  
Mathematics, 4.  
History, 3.  
Drawing, 2.

###### *Second Year.*

English, 3.  
Latin, 5.  
Greek, 5.  
Mathematics, 4.  
History, 3.

###### *Third Year.*

English, 3.  
Latin, 5.  
Greek, 5.  
Mathematics, 3.  
History, 3.  
Science, 6.

##### LATIN SCIENTIFIC COURSE.

###### *First Year.*

Same as in the Classical Course.

###### *Second Year.*

English, 4.  
Latin, 5.  
Mathematics, 4.  
History, 3.  
Science, 6.

###### *Third Year.*

English, 4.  
Latin, 5.  
Mathematics, 4.  
History, 3.  
Science, 6.

2. The North Side High School of Denver, Colorado, may be instanced as an extreme example of the progressive type of these schools.

According to a former principal, Mr. E. R. Downs, any pupil might, at the request of parent or guardian and with the approval of the principal of the school, study any subject which the daily programme permitted.

"No fixed amount of work was required of a pupil for a half year. It was the duty of the principal to see that each, according to his abilities, his aspirations, and his environment, was taking that kind and that amount of work which was best for him, after consultation with pupil and parent. The pupil did the 'electing' under supervision of the home and of the school, which were thus brought closely into touch.

"At the end of each half year, as pupils were admitted from the grammar schools twice a year, every pupil received a certificate showing the amount of successful work credited to him. Whenever he had received certificates showing 128 'points' credit, he was entitled to receive a diploma. Some could obtain this in 3 years, others in 3½, 4, 4½, or 5 years. On every diploma appeared the subjects successfully pursued and the amount of time devoted to each."

From the current catalogue of the school (1899), we quote the following:—

“The course of study is largely elective, one year’s work in each of the following subjects being required : language, mathematics, science, history, English composition (rhetoric) and literature. This is slightly more than one third of the course. If a pupil has a specific aim in mind, he can so select his work, with the advice of parents and teachers, that it will include those subjects suited to his powers and purposes.”

With so broad an elective privilege, the number of different courses is practically unlimited. The following typical courses are given in the annual report :—

*Typical Courses of the North Side High School, Denver, Colorado.*

CLASSICAL.      LATIN-SCIENTIFIC.      MODERN LANGUAGE.      ENGLISH.

YEAR I.

Latin.	Latin.	German.	English.
Algebra.	Algebra.	Algebra.	Algebra.
{ Zoology.	{ Zoology.	{ Zoology.	{ Zoology.
{ Botany.	{ Botany.	{ Botany.	{ Botany.
{ History.	{ History.	{ History.	{ History.
{ English Comp.	{ English Comp.	{ English Comp.	{ English Comp.

YEAR II.

Latin.	Latin.	German.	English.
Greek.	Geometry.	French.	Geometry.
Geometry.	{ Physics.	Geometry.	{ Physics.
{ Physics.	{ Chemistry.	{ Physics.	{ Chemistry.
{ Chemistry.	{ History.	{ Chemistry.	{ History.
	{ English Comp.		{ English Comp.

YEAR III.

Latin.	Latin.	German.	English.
Greek.	{ Arithmetic.	French.	{ Arithmetic.
	{ Book-keeping.		{ Book-keeping.
{ Chemistry.	{ Chemistry.	{ Chemistry.	{ Chemistry.
{ Physics.	{ Physics.	{ Physics.	{ Physics.
{ History.	{ History.	{ History.	{ History.
{ English Lit.	{ English Lit.	{ English Lit.	{ English Lit.

YEAR IV.

Latin.	Latin.	German.	English.
Greek.	French or Science.	French.	
French.	{ Geometry.	{ Geometry.	{ Geometry.
	{ Trigonometry.	{ Trigonometry.	{ Trigonometry.
{ Geometry.	{ Geology.	{ Geology.	{ Geology.
{ Trigonometry.	{ Astron. or French.	{ Astronomy.	{ Astronomy.
	{ Psychology.	{ Psychology.	{ Psychology.
{ History.	{ History.	{ History.	{ History.
{ English Lit.	{ English Lit.	{ English Lit.	{ English Lit.



## SECONDARY EDUCATION IN A DEMOCRATIC COMMUNITY.\*

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THE stability and progress of a democratic society depend on the prevalence of intelligence, character, and progressive well-being among its members, and on the predominance of superior men among its public servants and leaders of public opinion. These safeguards of society, it is admitted, are chiefly dependent on education.

The most cherished, as well as the most comprehensive, prerogative of an individual in a democratic society is the right of opportunity—the right to make the most of native endowment and to achieve material prosperity, culture, and social elevation, through persistent industry—no matter how humble his parentage or how narrow his circumstances in early life. But this right would be of little avail without its natural correlative, the habit of independent initiative. The preservation of this right and the cultivation of the corresponding habit depend, once more, on education.

Hence, to guard and promote its own interests and, at the same time, the interests of every individual, a democratic society provides equal educational advantages for all its members, on precisely the same terms; that is, to ensure the appropriate cultivation of every grade of ability and the discovery and development of superiority, wherever found, and to guard against the possible monopoly of education by the wealthy and socially superior classes, it makes education *free*; and in order to guard against the blindness of ignorance, it makes education, up to a certain point, *compulsory*.

Hence, also, a democratic society welcomes the provisions of private enterprise or private generosity for education; it regards with favour all private and endowed educational institutions, as such, and gives them free play beside its own. Sometimes such institutions meet important educational needs which public education has not yet adequately provided for; sometimes indeed, such institutions are an inheritance from the past, built up by the sacrifices and benevolence of past generations; strengthened by contemporary benevolence they enjoy a

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\* In the preparation of this paper, the writer has drawn freely on his "Educational Aims and Educational Values."—The Macmillan Company, 1899.

flourishing prosperity, and are among the noblest and most cherished of educational resources.\*

The education demanded by a democratic society is therefore an education that prepares an individual to overcome the inevitable difficulties that stand in the way of his material and spiritual advancement: an education that, from the beginning, promotes his normal physical development through the most salutary physical environment and appropriate physical training; that opens his mind and lets the world in through every natural power of observation and assimilation: that cultivates hand-power as well as head-power: that inculcates the appreciation of beauty in nature and in art: and insists on the performance of duty to self and to others: an education that in youth and early manhood, while continuing the work already done, enables the youth to discover his own powers and limitations; that impels him through oft-repeated intellectual conquests or other forms of productive effort to look forward to a life of habitual achievement with his head, or his hands, or both; that enables him to analyse for himself the intellectual, economic, and political problems of his time, and that gives the insight, the interest, and the power to deal with them as successfully as possible for his own advancement and for social service; and finally, that causes him to realize that the only way to win and to retain the prizes of life, namely, wealth, culture, leisure, honour, is an ever-increasing usefulness, and makes him feel that a life without growth and without service is not worth living.

That is to say, the education demanded by a democratic society in modern times must be a *preparation for an active life*. Now the only real preparation for life's duties, opportunities, and privileges is *participation* in them, so far as they can be rendered *intelligible*, *interesting*, and *accessible* to children and youth of *school age*, and hence the first duty of all education is to *promote* this participation as fully and as freely as possible. From the beginning, such an education cannot be limited to the *rudiments*—reading, writing, ciphering. It must acquaint the *pupil* with his material and social environment, in order that *every avenue to knowledge* may be opened to him, and every

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\* The United States free public education is universal. In most of the States it is free from the primary school through the University. In some it is free from the primary ("primary" and "grammar school") and secondary ("high school") schools. In some it is provided at the expense of the communities with, in a little less than half from the State; and, in addition, most of the States provide free higher (college and university) education in a State or Federal University. All the States require their communities to maintain free elementary schools. Massachusetts is the only State that requires its communities to maintain free public high schools; but all the States have State universities. Private and endowed schools exist in all the States. They are numerous in the Eastern States, particularly in New England. Some of the most celebrated secondary schools of the United States are private. Some of the best are the modern "Institutes" (which are the English "Polytechnics"); and there are many excellent private schools. Indifferent and poor private schools are numerous. The State and Federal universities are not subject to the same requirements as the public schools. In some States (see to it that private elementary schools are subject to the same requirements of study, the requirements of the law of compulsory education of children under fourteen years of age.

incipient power receive appropriate cultivation. Any other course is a *postponement of education*, not education. Such a postponement is a permanent loss to the individual and to society. It is a perversion of opportunity, and an economic waste.

We have lately learned this lesson in the United States. Some years ago we began to realise that a drill in the three "R's" and English grammar (usually taught from a book), together with book geography, consisting chiefly of statistics relating to location, population, areas, and products, failed to educate our children; that is, that such a programme of studies, though faithfully pursued and rigidly administered, left too many children—most of those who could not attend school more than six or eight years—without any permanent interests in nature, or in human institutions and human achievements; and without much inclination to acquire such interests by further study, or power to assimilate or apply such knowledge and skill as they had gained. It was quite generally true that the total permanent result of the first eight or nine years of the pupil's school life was the ability to read, but not the reading habit; the ability to spell and write words, but no power of expression with the pen; a varying ability to add, subtract, multiply, and divide simple numbers, integral and fractional, but much uncertainty in all other arithmetical operations; some fragmentary book knowledge of names and places of our own country and of foreign countries; and some scrappy information relating to the history of the United States. Most pupils had derived few permanent interests from these first years of school life, and those who left school without entering the high school\* very naturally regarded what they had learned of intellectual pursuits as typical of intellectual interests in general, and felt for them little respect and less regard. Inasmuch as the great majority of the community never reach the high school or any other secondary school, it is evident that, for the great majority of the community, education had been only an incident, and not, as it should be, a great leavening, intellectual, moral, and social force. This was the natural result of an attempt to prepare for life without using life's opportunities as the source and means of such preparation. Accordingly, we have changed our plan. Through elementary natural science we are bringing nature into the school room and we go out to meet it; we bring literature, history, art, and manual training into the school as a means of preparation for life, instead of "preparing" our pupils for contact with these sources of inspiration, guidance, and training, in an indefinite future.

We have learned that a child should know how to read and write by the end of the third school year, *i.e.*, at about nine years of age; that in about five years (by eleven years of age), he can

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\* The "high school" is the name applied in the United States to the higher grades of the public school programme. The entire public school programme covers twelve (in New England, usually thirteen) grades—from the pupil's fifth or sixth to his eighteenth or nineteenth year of age. The last four grades—rarely the last five or six grades—are almost always segregated in a separate building. Hence the name "the high school" Only the large cities have more than one high school

...the wisdom of this choice turns the welfare



of each unit in the State and therefore of the State itself. So vital is the connection between the individual's choice and the State's integrity, so essential to wisdom of choice is one's awakening to his own capacity and one's vision of the prizes that are possible to such awakening, that no State can afford to suffer its children or any portion of them to grow up without this revelation of themselves to themselves and without this stimulus from the splendid visions of a larger usefulness and a finer happiness." \*

A democratic education is, therefore, characterized by continuity as well as scope. We must have school systems and programmes of study that make the pupil's work an ever-expanding revelation of the world in which he lives and of his own relation to it including his duties and his privileges. There should be no abrupt introduction to totally new subjects and processes: the pupil should be led to approach all subjects gradually. For example, he should be led, on the one hand, through concrete geometry and simple applications of algebraic symbols and processes in connection with his work in arithmetic, to geometry and algebra; and through nature study to physical and biological science (physics, chemistry, physiography, astronomy, botany, zoology); and, on the other hand, to history and literature through fable, myth, story and biography; and to foreign language through simple language exercises that reveal to him simultaneously the significance of the science of grammar as a guide to the study of his mother tongue and as an instrument in foreign-language acquisition. At the same time we must not neglect the value of art and manual training both for educational and industrial purposes, and must therefore endeavour to make our programmes of study provide appropriate opportunities for training in the elements of the fine arts and of the mechanic arts as well. That is to say, we must endeavour to make the pupil's entire school career serve, continuously and progressively, his expanding interests, powers, and needs. We seek through such an education to prepare him for a life of usefulness and happiness by adapting him, first of all, to the civilization into which he is born, and at the same time, if his circumstances permit, to prepare him to attain the fullest self-realization, through further study, on the foundation already laid.

Yet another characteristic must not be wanting in democratic education. Throughout the pupil's entire career his progress should not be unduly hastened or retarded by any attempt to make him advance in all subjects at the same rate, nor by the attempt to make all pupils reach the same level of attainment in all subjects at the same time. Such a horizontal stratification of the pupil's development is mechanical in the extreme. It does not permit a child, however bright or diligent he may be, to advance more rapidly than his neighbour, however dull, lazy,

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\* Hon. Frank A. Hill, Secretary of the Board of Education of the State of Massachusetts. "How far the Public High School is a Just Charge upon the Public Treasury." An address given before the New England Association of Colleges and Preparatory Schools, 1898; published by the Association, and also in the Sixty-second Annual Report of the State Board of Education of Massachusetts.

or indifferent that neighbour may be. It keeps him "marking time": it cultivates idleness and often aversion to school work. On the other hand, to hurry a pupil through lessons only half assimilated is sure to lead to a benumbing helplessness that easily becomes permanent. That such a procedure too often gives rise to the weariness and aversion that too many children associate with school pursuits has unfortunately been sufficiently proved in the schools of the past. Moreover, it is unjust. At last, its mischievous effects and its injustice are recognised. To-day, throughout the United States, a number of plans for permitting pupils to advance as rapidly as their capacity will permit, or as slowly as their capacity requires, are in operation.\* While none of these plans are wholly satisfactory, as yet, they are all better than the artificial process of levelling down or up as occasion might require, formerly in vogue: and from this widespread serious endeavour to solve an important educational problem we have much to hope in the future.

Education in a democratic society should, therefore, possess scope, continuity and flexibility—a scope as wide as human interests, as continuous as human development and the equal opportunities of all require, and as flexible as human capacities require and permit.

Bearing this fundamental requirement of democratic education in mind, let us enquire, What is the special task of secondary education—the education appropriate to later childhood and youth?

We have seen that elementary, or pre-secondary education, should provide the most salutary physical environment for the pupil, and promote his normal physical development through appropriate training; it should open the mind of the child and let the world in; it should stimulate and gratify curiosity in every field of worthy human activity, and utilise this curiosity for the acquisition of knowledge, and the development of permanent interests in, and power over this knowledge; it should acquaint the pupil with his duties and his privileges as a temporarily dependent member of Society, and promote the development of habits of thought and conduct in harmony with his growing insight. At about the age of twelve or thirteen the period of secondary education begins.

Now, continuous development from the stage of early childhood, covered by the period of elementary education, into the stage of later childhood and youth, covered by the period of secondary education, does not involve the abandonment of these aims. On the contrary, these aims must continue to influence the pupil's education throughout the entire formation period. But they are subject to some modifications.

The pupil's mind must still be nourished, but it is no longer possible for him to pursue simultaneously the elements of all knowledge, when that knowledge has diverged into distinct subjects, even if he were impelled to do so. Moreover, as yet, the mind of the child has only been awakened. An orderly presentation of the whole field of knowledge, in its elements, has called

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\* See, for example, the device used in the Cambridge (Mass.) Grammar Schools given below in the Appendix, Section 11.

into activity his varied powers, and has given him glimpses of fresh fields to explore, and greater conquests to achieve beyond. He is prepared to seize eagerly on every subject, and to enter with zest on every fresh undertaking.

But he is still a very unstable creature. Much of the knowledge and power and interest of the earlier years is superficial and transitory. The random interest, the restless activity, the manifold impulses of this early stage are yet to be organised and controlled. Alertness must not be sacrificed, but interest must glow steadily; choice and action must become deliberate. Stability and concentration must come to characterise the *youth's* mental life as well as alertness and activity.

Now, alertness, stability, and vigorous activity are sure to follow the adaptation of work to individual interests. These individual interests begin to emerge as soon as the pupil's acquisitions arrange themselves into separate classes. As these classes of acquisitions and pursuits diverge more and more, each of them assumes marked peculiarities. The youth finds himself no longer attracted by every suggested activity, but certain kinds of knowledge and certain forms of activity have a charm for him which other forms of knowledge and other forms of activity do not possess. The field of knowledge has become an array of different subjects, each of which has its own peculiar form and contents, and its own peculiar mode of treatment. He feels himself, unconsciously at first, but with rapidly growing consciousness, permanently attracted by some subjects, and by some forms of activity; while, similarly, other subjects and other activities are indifferent or even distasteful to him. This gradual selective or elective action of the pupil's mind is as *important* as it is *natural*. Further, during the period of elementary education, the pupil was content to live in the present; during the years of adolescence he begins to question the future. Accordingly, the years of adolescence and of early manhood require a readjustment of the pupil's education to the new demands of his progressive development, and to his assimilation to the society of which he is to become an active member.

The period of secondary education is, therefore, extremely important. The years covered by it, say from the pupil's thirteenth to his nineteenth or twentieth year, mark the transition from early childhood into later childhood and youth; the period during which the child learns to put away childish things and to appreciate the interests and purposes of men; to find his place in the social whole, and to realize the interdependence of public and private interests. It is the period when life aims and life habits emerge distinctly, and under wise direction become dominant life influences; or when, under adverse circumstances, these aims become atrophied for want of proper cultivation, or even perverted through false training. In any event they rapidly develop stability; and, so far as they are amenable to education, may, therefore, be permanently influenced. Now, an individual's dominant interests and powers wholly determine the kind of work he voluntarily engages in, and also the sources of his pleasures; and thus, ultimately, wholly determine his productive-

ness and the character of his public and private life. To carry forward the work of development already begun in elementary education, and at the same time to discharge its duty to society as well as to the individual, it is, therefore, clear that *secondary education should especially promote the discovery and development of each pupil's dominant interests and powers; and further, that it should seek to render these interests and powers subservient to life's serious purposes, and also to the possibility of participation in the refined pleasures of life.*

The serious purposes of life are, first, self-support; or, when that is unnecessary, some worthy form of service; second, intelligent, active participation in human affairs—the intention to be one who, while performing his private duties and enjoying whatever leisure he may earn or deserve, is to work with his fellow men for the continuous improvement and happiness of his race, his nation, and his own immediate community.

The refined pleasures of life are found in the ability to participate with intelligence and appreciation in the intellectual and æsthetic interests of cultivated men. These pleasures, like most of the inspiration to worthy living in the pursuit of the serious purposes of life, are brought within the reach of men through general culture.

This is the meaning of the scope of modern secondary-school programmes in England and America, and also of the growing tendency toward flexible (suggestive) rather than mandatory programmes, so far as these programmes are based on reasonable public demands—demands approved by thoughtful teachers. It seems to me, therefore, that the special task of modern secondary education in a democratic society is fairly described in the following statement:—

First, to promote the pupil's normal physical development.

Second, to stimulate every individual to aim at intelligent self-support or some worthy form of life-work, whether he inherits an income or not; and to give him general preparation for such activity.

Third, to stimulate and prepare each pupil, so far as his age and the time limits of secondary education permit, to participate, intelligently and helpfully, in promoting the welfare of the society of which he is to form a part.

Fourth, to prepare and to stimulate each pupil to carry forward his own development uninterruptedly, so far as his circumstances permit, through self-teaching, whether he continues his studies in some higher institution after his school life is closed, or whether he enters at once on his active life work.

The important place occupied by secondary education in a democratic society is now apparent. It covers the plastic years of later childhood and of youth, the years during which the youth's mental life is organized and permanently fixed; and it is the most widely available organized social force for elevating, refining, and unifying a democratic society.

It will be seen that the statement of the function of secondary education just given comprises three classes of aims, namely

*vocational aims, social aims, and culture aims.* These three aims are, of course, not separable in practice, although they can be rarely, if ever; equally influential in determining any particular phase of school work. Moreover, as I shall endeavour to show later, the attempt to separate them in practice would greatly impair their efficacy; and, in particular, the only way to realize the culture aims, for many pupils, will be the close affiliation which the pupils must be led to see between these and the vocational and social or civic aims. These three aims, then, ought together to permeate and underlie all the activities of the secondary school. We may, however, discuss them separately.

But what is general culture? Ever since the Renaissance the meaning attached to this term, until recently, has been well nigh restricted to acquaintance with the historical culture of the race embodied in the languages, history, and literature of ancient Greece and Rome, together with some knowledge of mathematics; that is to say, general culture has been nearly synonymous with classical scholarship. But a glance at modern programmes of study in secondary schools and colleges, whether these programmes are prescribed or elective, or a moment's reflection, will show that the modern idea of general culture is much broader than classical scholarship. It is a truism to say that the range of life interests, the problems, and the resources of civilization, have increased enormously since the Renaissance. While we feel on every hand the influence of classical traditions in our modern culture, and while, therefore, we can never wish to dispense with classical scholarship as an element of general culture, it still remains true that a new culture and a new civilization have arisen since the Renaissance, and especially since the eighteenth century, which have their own resources of inspiration and guidance, and present their own problems for solution. *To be ignorant of these resources and problems is for the modern man to be out of relation with his time, is to miss general culture.*

The process of adjusting ourselves to a revised and enlarged conception of general culture is now going on. The old narrow ideal is tenacious of life. It is powerfully intrenched in existing programmes of study, and in educational traditions; in particular, it is sustained by collegiate preferences for classical studies in secondary schools; and lastly and chiefly, it is strong by virtue of real achievements in the education of many generations of men. But alone it can no longer suffice. *Tempora mutantur.*

It has gradually become obvious to interested persons that, although the pupils may have pursued the classical languages and elementary mathematics for several years with diligence and more or less success, they have not had time for any serious study of other subjects. They have left school without any training worth the name in the power to use their mother-tongue, and with scarcely any acquaintance with its literature; they have had no time for history save a scrappy history of Greece or Rome; have had no time for natural sciences; have had no time for modern languages; have had no opportunity to get manual training or commercial training; have too often had little



opportunity to promote their normal physical development through appropriate physical exercises. It has become evident to many thoughtful persons that for most of the great majority of pupils who never go to college, such a secondary education, like the barren elementary education that formerly preceded it, is a perversion of opportunity, and involves a sad waste of time.

Such a secondary education leaves the pupil at eighteen or nineteen untouched by the beauties, the solace, and the inspiration of the literature of his mother-tongue, and without the power to use his mother-tongue with something approaching accuracy, ease, vigour, and grace; it gives him no historical training that would enable him to understand and appreciate the institutional life of organised modern society; it gives him no training in natural science, and so leaves him without the power to understand or appreciate some of the most important thought and activities of his time; it gives him no training in a modern language—German or French—that would open to him the intellectual resources and the genius of other modern nations; it gives him no training that would enable him to share with understanding and appreciation to some extent in the art treasures of his own and of all time; it affords no manual training or commercial training that might enable him to understand the dignity and the importance of mechanical and commercial pursuits as well as of intellectual labour, or to fit himself to enter on such pursuits if adapted to his needs and tastes with an increased prospect of immediate usefulness; and lastly, it has often paid too little attention to his physical development and vigour, on which all his happiness and usefulness ultimately depend. Such an education, whatever it might be as a preparation for a college course that might make good the omissions and defects of earlier education, cannot be “a preparation for life,”—cannot conduce to active participation in the life of to-day. Contemporary needs are not provided for in it save incidentally and remotely. The mistake of our outgrown elementary education has been repeated. The attempt has been made to prepare the pupil for life without participation in life’s opportunities, privileges, and duties.

Such an education has been justified, however, on the ground of its *disciplinary* value. No matter whether knowledge, or interest in the acquisition of knowledge, or interest in the great contemporary concerns of life and some power to deal with them, has been acquired or not, the mind, it has been said, has received a training that will fit it to undertake, with every expectation of success, any problems or career whatever. This theory is about as sound as that a training in football would give men an interest in and train power for blacksmithing, or farming; or that a course in tennis would develop interest and power in carpentry—in the making of tables, cupboards, or houses. As soon as men began to reflect on the absurdity of this view, it was naturally perceived that the mental gymnastics had been misapplied; that the development of power could not be dissociated from subject-matter; and consequently, that to develop

interest in the vital concerns of modern life and power over them' there must be participation in those very concerns.

The first step towards realizing our revised conception of general culture through secondary education is, therefore, to admit frankly that general culture means much more to-day than classical scholarship; that it may, indeed, mean something entirely different. The next step is, I think, to admit as frankly that classical scholarship, *i.e.*, literary appreciation of the classics, is not attainable in the secondary school. What is attainable is a fair to good elementary acquaintance with the classical languages, which is a very different thing. This achievement, for many pupils, is desirable; but, at present, it is not economically attained. Now, is it not true that what we value most in the classics for all secondary school pupils who do not go to college, what we regard as most important, is to bring to bear the refining and enlightening influence of Greek and Roman thought, whether embodied in ancient art, or literature or institutions, on the thought and life of to-day and of all time? It is my belief that this influence can be best realized, in secondary education, not primarily through an extended study of the classical languages, but through a serious study of history and art, together with translations of the classical literatures into the mother-tongue and other modern languages. What secondary school pupil can appreciate Homer, Æschylus, or Demosthenes, Virgil, Horace, or Cicero in the original, as he can appreciate them in admirable translations? We have begun to recognise the magnificent possibilities of instruction in the language and literature of English-speaking nations for their own sake. Why should we not also use the mother-tongue to bring the minds of our boys and girls into actual touch with the inspiring literatures of antiquity? What they now see "through a glass darkly" they would then see "face to face." If such study, preceded or accompanied by a *serious study* of the modern languages, be then followed by a brief course in one of the classical languages, or both of them, during the last year or two of the secondary-school course, sufficient to enable a youth to realize the importance of these languages to a full comprehension of the history and structure of his mother-tongue, and the significance of Latin and Greek in all advanced linguistic study, the full educational value of the classics for secondary-school pupils would be economically and fully realized.

Accordingly, we need such an extension of the scope of secondary education as to make it include a serious study of modern subjects—physical and biological science, history (including the history of industry, of commerce, of education, of art and of philanthropy, as well as political history), government and economics; the literature of the mother-tongue; modern foreign languages; the elements of the fine arts and of the mechanic arts; and the elements of commercial training—all adapted to the needs of both sexes. Let no one be surprised to see manual training for both sexes and the elements of commercial training included in the studies to be



pursued for general culture. All teachers are aware that the only way to arouse the minds of some pupils lies through "practical studies." Some minds are for a time quite inaccessible to intellectual pursuits as such. To such pupils intellectual pursuits acquire interest and significance only as they are seen to be associated with trades, manufactures or commerce. Mathematics, sciences or foreign languages acquire significance for many minds only when it becomes clear that these subjects underlie important phases of industrial or commercial life. Undertaken at first because of an interest with which they are associated, these subjects acquire, under wise guidance, the significance that belongs to them as such, and the way to general culture lies for a time at least through manual and commercial training.

Only through such programmes can we realise the culture aims of modern secondary education: for general culture means *the capacity to understand, appreciate, and react on the resources and the problems of modern civilization*. These resources and problems are found in the preservation of the health, physical vigour, and material well-being of the race: in natural science: in modern governments: in modern industry and commerce: in modern literatures and languages—the record of the ideals and aspirations of the race in modern times: in history—the record of the achievements of the race: and in the art treasures of all times. As I have just said, we can never wish to exclude from the modern conception of general culture the influence of classical scholarship: but the place to attempt the realisation of classical scholarship itself is, in my opinion, not the secondary school, but the college and the university.

Modern secondary education, like modern elementary education, must therefore be characterised by *adequate scope*. The next requirement is not far to seek. While the needs of individuals and of society require comprehensive programmes of studies, it is manifestly impossible for any one person to compass all the training required for modern life. Further, each individual best promotes his own development and his capacity for social service by adapting his education to his own tastes, capacities, and future needs. Hence secondary education in a democratic society must *permit each pupil to choose his own curriculum*. Let me not be misunderstood. I would not have a child twelve or thirteen years old freely choose his courses of study. But I would have his training, from his thirteenth year onward, a *training in choice*.

It was pointed out above that the period of secondary education covers the important stage of adolescence and youth, during which the pupil may be led to self revelation, and during which his mental life may be organised in accordance with his dominant interests and capacities. It was also pointed out that after an individual's interests have emerged distinctly all voluntary effort is reserved for his preferences, and that achievement is most productive when it is based on interest and capacity: and finally, that an individual's dominant interests

ultimately determine the extent of his private and public usefulness, and the sources of his pleasures—that, in short, they determine the richness or the poverty of his life in the broadest sense of those words. If this be admitted, the importance of discovering and cultivating a youth's dominant interests is apparent. He should therefore choose his own curriculum as soon as possible. His power to choose his work should be deliberately cultivated. He can learn to choose wisely only by choosing repeatedly, under guidance, as wisely as possible. Hence, although a child twelve or thirteen years old should not freely choose his own courses of study, he is, nevertheless, entitled to have his preferences considered in the choices which his parents and teachers permit him to make. As he grows older, his ability to choose wisely should be deliberately cultivated, so that usually by the time he has completed his secondary-school education—rarely before that time—he may be prepared to choose his further studies without restrictions. A youth of eighteen or nineteen who has been learning to choose, who has had training in foresight for five or six years, is not likely to abuse his privileges, nor is he likely to be ignorant of the importance of wise counsel, nor to wish to dispense with it.

Accordingly we require of secondary education a *flexibility* that deliberately cultivates the power of choice. To do this is to give free play to the right of opportunity, and to cultivate the habit of independent initiative, so important in a democratic society. *Flexibility* in secondary education accordingly means, in addition to what it means in elementary education, that the pupil is free, under certain obvious restrictions, chiefly as to sequence and amount, to choose his own studies in accordance with the gradual discovery of his dominant interests and consequent future needs; and that this freedom shall lead gradually to his complete emancipation from external restraint and guidance—that it shall lead to *self-direction*.\*

In order that secondary education may duly serve the purposes of general culture,—and all other purposes too,—it must, therefore, be characterised by *scope* and *flexibility*. At the same time *intensiveness* must not be lacking. Any subject once undertaken must be pursued long enough and earnestly enough to make it yield its educational value for the pupil within the appropriate limits of secondary education; or to make it clear that further pursuit of it would not be profitable for him. For most subjects and pupils one school year would ordinarily be long enough to reach this decision. It is clear, however, that no such decision is possible without tactful teachers whose interest in their pupils is at least as great as their interest in the subjects which they teach.

To assert that secondary education should minister to vocational aims does not mean that the secondary school should teach a

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\* The apparent difficulties of administration under such a system are not so great that they do not yield readily to wise and determined management. But the system implies the co-operation of the entire teaching corps of any school that adopts it. Many interesting experiments of this sort are, at present, under way in the public high schools of the United States.

trade or a profession. It means, primarily, that the school should acquaint the pupil with the meaning and the importance of a vocation; but it also means that the school should give the pupil such general preparation for the life pursuit, for which his ~~interests~~ and aptitudes especially qualify him, that when he leaves the secondary school he may enter on the preparation for his chosen pursuit, or that pursuit itself, with some knowledge of its ~~subsequent~~ meaning, some knowledge of the underlying principles on which success in it depends, and some power over its fundamental facts and processes.

Such preparation the secondary school may be expected to give both directly and indirectly; indirectly through the inspiring example of cultivated teachers devoted to their vocation; teachers who consciously but judiciously cultivate sympathetic relations with their pupils, and lose no opportunity to teach unobtrusively and without preaching the bearing of all education on a life of usefulness. Such teaching we have a right to expect in the secondary school. Who can doubt that it would have an important influence on the development of a permanent tendency in all teachable pupils toward an active life; toward an anticipation of the time when they, too, having made the best possible use of their present opportunities, might lay hold on life's larger duties and become independent workers in the world?

But we also expect the secondary school to minister directly to vocational aims through its course of study. Vocations, speaking broadly, are mechanical or industrial, commercial and intellectual. The vocational aims of the secondary school for intellectual pursuits—for the professions—have long been recognised and justified, and need not detain us. It should be said, however, that secondary education has not been so administered in the past, that this function has been adequately discharged, although recognised. A few moments ago the reader was reminded that since an individual's greatest capacity for service and for happiness depends on the discovery and the cultivation of his permanent interests and real abilities, the pupil's gradual self-revelation is one of the most important functions of secondary education. This self-revelation and the corresponding development based on it, have often been thwarted, or at least obscured and delayed if not entirely thwarted, by the narrow and rigid programmes of the past. With the advent of an enlarged scope, and the flexibility now happily becoming general in secondary school programmes, we may confidently hope for steady improvement in this regard in the future. We must admit however, that the vocational aims for the secondary school as regards preparation for professional pursuits are recognised and justified, whatever short-comings in achievement there may be. What we do not yet fully recognise, however, is the function of the secondary school as regards the vocational aims of those who subsequently devote themselves to industrial and commercial pursuits. This function deserves recognition on the broadest grounds, both for the sake of the vocational interests themselves, and for the sake of all the possible interests which the individual or society has.

This means that, in addition to the purely intellectual courses, we should maintain in every secondary school, whether public or private, courses in manual training and commercial courses, which, together with their general educational aims, minister directly to vocational and social aims.

The plea for such courses in secondary education is, of course, not new. But who will assert that we have heeded it as it deserves to be heeded? Moreover, I desire to insist on the indispensable value of such courses in all secondary education, and not on the establishment of isolated manual training or commercial schools, although I am ready to admit the present value of such separate schools as important transitional stages in the evolution of the comprehensive scheme of secondary education toward which I believe we are tending, and which seems to me both inevitable and desirable. Moreover, in the existing manual training classes, and manual training or mechanic-arts high schools, pedagogical rather than vocational and social ends have received most attention and the greatest emphasis. This is attested by the prevalent tone of most of the discussion of manual training. I am far from indifferent to the general educational value of appropriate manual training for all classes of children of both sexes, but my present purpose is to insist on the necessity of manual training and commercial courses in all secondary schools for vocational and social ends, and on the appropriate special development of such courses for those who are to enter industrial and commercial callings in particular.

We provide the general literary and scientific training required for intelligent participation in a wide range of the life interests of to-day. Can anyone assign a satisfactory reason why we should decline to provide the training in the mechanic arts, and in the fundamental principles and processes of commerce essential to intelligent participation in an equally important range of contemporary life interests? I cannot. Democratic education, that offers equal opportunities to all, must therefore, in my opinion, provide as adequately for the vocational aims of future artisans and merchants as for future professional men.

Unless the public secondary school which the community supports by taxation, or the public secondary school which invites the support of the community, responds to the two fundamental needs of our youth which have just been considered, pupils too often pass at once from the elementary schools to their life work; or, if their circumstances permit, they may, so far as preparation for business is concerned, seek it, at present, in some inferior institution like the "Commercial College." In either case the result is likely to be attended by widespread ignorance among the industrial and commercial classes, which makes them the prey of the demagogue and the social agitator, and by the accompanying disheartening indifference to all interests except the narrowly useful, important as these are. A child who, on leaving the elementary school, thenceforward devotes himself to a trade or to business, is almost sure to have his interests limited by his occupation,

whether with or against his original inclination, to say nothing of the fact that his success is made extremely difficult because of his ignorance and inadequate preparation. If, however, all obstacles to success are ultimately overcome by his unusual industry and natural capacity, the successful but unenlightened merchant or artisan is, in the end, almost sure to swell the ranks of the philistines, for he has missed the development of those extra-vocational interests which persons of some degree of cultivation possess in common, and which serve to enrich and sweeten life.

But such courses are needed not merely to satisfy the educational needs of those children who subsequently devote themselves to industrial or commercial pursuits. Many a youth destined for a professional career would be much more useful and happy, much more successful, and a much more efficient member of society in after life, if, instead of attempting to pursue a profession which he had drifted into, or which has been arbitrarily chosen for him, he had cultivated his mechanical or business tastes and capacity, and had learned through courses in manual training and commercial courses, while still a youth, to select the calling for which he is best fitted by nature. By failing to provide such courses for such a pupil we prevent him from developing the powers which he has; we dwarf his general culture by requiring him to follow a course of instruction to which he is not adapted, and this is followed by a professional training through which he can only hope to escape failure or at best to attain mediocrity; and all this is a *perversion* of education. These courses are accordingly needed, as well as the purely intellectual courses, for the discovery and development of the dominant interests and capacities of all children. By placing such courses side by side with the intellectual course, by making them solid and liberalizing, we attach due weight to their scope and meaning; we put the stamp of general approval on them; we dignify them; we make them worth choosing, no matter from what class of society the pupil may come. By so doing, the school may minister directly and wisely to vocational aims.

It has already been intimated that the courses which minister to them also minister incidentally and in an important sense to social aims. But the social aims themselves are too important for all classes of pupils to permit us to be satisfied with this. These social aims must themselves receive special recognition.

To insist that the secondary school in a democratic society should minister to social aims does not mean that the secondary school should give a legal or political education, but it means that the school shall give a training that prepares for the duties of good citizenship; or, as it was phrased above, that prepares and stimulates the pupil to active and intelligent participation in promoting the welfare of society. Such preparation necessitates some comprehension of the nature of organised society, that is of the institutions and activities which society maintains, encourages



and permits for its stability, perpetuity, and prosperity; that is for the usefulness and happiness of its members. These institutions are, primarily, Government or political institutions, industrial and commercial institutions and activities, and educational institutions. The education demanded by society, therefore, justly insists on instruction in subjects that acquaint the pupil with these activities and institutions, that develops an interest in them, and ultimately the power to be of service in them. The principles and methods of municipal, state, and national government must be explained and made familiar to the pupil; he must also receive instruction that will help him to understand the complex relations of our modern industrial system; and he should know something of the systems of public education by which society strives to conserve, improve, and transmit the progress it has made.

Under such circumstances we may justly expect the secondary school to do its share in arousing interest in, and insight into, our institutional life—our municipal, state, and national institutions, our political, industrial, commercial, and educational affairs. Accordingly, we justly ask that history, civics, economics—the social studies—shall receive much fuller recognition in secondary school courses of study than has been accorded them hitherto, and that these subjects shall not be sundered, but be kept in intimate association.\* We ask that our meagre and inadequate courses in history shall really comprise an elementary descriptive sociology, and an account of the development of the institutions of modern society. Instead of consisting chiefly of accounts of wars, dynasties, and court intrigue, we ask that courses in history shall deal, by preference, with the arts and occupations of peace, with the history of industry, of commerce, of scientific inventions, and, ere long, let us hope, with the history of art, education and philanthropy. In all this, righteous wars will have their place; but the war hero, as such, will no longer be the sole or even the chief example of moral heroism with which to fire the imagination and arouse the spirit of emulation of our hero-worshipping and impressionable youth.

But there are other ways in which the school can train for citizenship. The school itself, through its teachers, may and should become a participator in the life of the community. The teachers should identify themselves with public concerns. If they have a share in promoting community interests, small or large as the case may be, the life of the community will flow through the school, and the meaning of citizenship, its functions, problems, and privileges, will be brought home to the pupils. Again, those who have public concerns in charge, the mayor, park commissioner, chief of the fire department, city engineer, chairman of the school board, or the director of some bank, railroad, or manufactory, may be invited into the school, and may,

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\* For suggestions concerning the teaching of Economics in Secondary Schools, see *The School Review* (Chicago), Vol. IV., 604, and Vol. VI., 27577; and *Education* (Boston), for January 1897.





graduates. Most of our editors, politicians, skilled mechanics, and labour leaders, our leading business men, and even the great majority of our professional men are not college-bred, but they have usually had a secondary school training. These persons are commonly the leaders of the people. The university trains the leaders of these leaders, rather than these leaders themselves.

Now, education can diffuse common aims and common interests among the people only by permitting the pupils to participate in the pursuits which embody these aims and interests. Such participation may be either direct or indirect, *i.e.*, the pupils may actually share, under the same conditions, the same instruction; or they may come to understand and appreciate, to some extent, the value of all subjects by daily intimate association with them as a part of the work of the comprehensive institution, whose privileges all may share; easy access to all the instruction of the entire institution being assumed, and also an administration that promotes inner social equality, whether the school associations thus promoted extend to the homes or not.

My plea is, therefore, that secondary education in a democratic society shall be organised so as to consist of co-ordinate departments, all with the same articulation to the earlier work, and so intimately related to each other that a constant interchange may take place among the pupils in the separate departments in accordance with the tastes and needs of each pupil as they appear. Otherwise we endorse and promote the arbitrary relegation of one pupil to one social class, and another to another, in advance of knowledge as to which class he really belongs to. There is another important consideration which supports my plea. To relegate nearly all the instruction that traditionally and really aims almost wholly at "general culture" to one school, the classical school, and nearly all the instruction whose chief function is to acquaint the pupil with the fundamental principles and processes of the mechanical trades, or of business, to another school—the "English high school," the manual training school, or the "commercial school"—is to proceed, on the one hand, as if training for immediate usefulness had little or no interest for the student of general culture; and, on the other hand, as if the pursuit of general culture, as such, were naturally foreign to the interests of the future mechanic or merchant. In either case we would commit a fatal error. It is quite as unfortunate to disparage general culture as it is to disparage training for immediate usefulness. The introduction of courses that in addition to their general educational value are conspicuously useful in preparing for a life of self-support should be welcomed by the side of the other courses. Such provision for the various educational interests of our youth, is needed for that training in choice that I emphasised a while ago; and I confess also that I cherish the hope that the dignity of skilled labour and of superior business integrity, insight, and power, as well as intellectual resources and power—that all kinds of skilled labour, whether manual, commercial, or professional, well and faithfully performed—will gradually gain increased dignity and early recognition

through the instruction of young men and women who participate for several years, directly or by association, to some extent at least, in preparation for all three.

This paper has dealt exclusively with the instruction which secondary schools in a democratic society should offer. No reference has been made, save incidentally, to methods of teaching and governing. Of course, a whole essay might be worthily devoted to each of these subjects, but I must content myself here with the remark that the methods of teaching should constantly challenge the learner's independent activity, and cultivate the habit of adequate achievement; and that the government of the pupils should be so managed as to enlist their co-operation in the administration of school affairs, and that the incentives and deterrents employed should be, so far as possible, such as do not lose their force as the pupil grows older.

The most serious contemporary obstruction to the development of secondary education in democratic societies, in some such way as has been set forth in this paper, is the unwillingness of colleges and universities to recognise non-classical secondary education, no matter how well done, as equal in dignity and solidity to classical education for preparatory training. This disparagement by the colleges and universities of non-classical secondary education in the secondary schools will doubtless continue to cast its shadow over the free development of modern education for some time to come. Universities have always been the strongholds of educational conservatism. Nevertheless, a democratic society must seek some way to overcome it. University education and social elevation go together. To close the door of the university on an aspiring student merely because he has not pursued a rigidly prescribed set of required subjects, no matter how good as to quantity and quality his precollegiate work in other subjects has been, is to close the door of the highest educational opportunity a democratic society can afford. Fortunately, in the United States, universities everywhere are gradually adjusting themselves to modern demands in this regard, and it is daily becoming clearer that before many years all universities will admit that any good secondary education, either with or without the classics, is a good preparation for college or university education. It is even safe to predict, I think, that before many years it will be clear to all higher institutions of learning that unless they recognize this truth the main line of progress will lead past instead of through their doors.

Of course, such a secondary education as has been described above cannot be had at a bound. It can only be gradually realized. In the process of transition pupils must still be prepared for college, or for the public service, along definitely prescribed lines. For such pupils, under existing conditions, little freedom of choice can be permitted. But, except in the last years of preparation for a particular kind of service, I think it will be clearly perceived in time, that the best general preparation is not a rigidly prescribed particular group of

subjects, but the freest possible choice of subjects consistent with *continuity and intensiveness of work*. A similar statement applies to the education of a youth in accordance with the existing conventional standards of a liberal education. For the present, every "liberally educated" youth who does not wish to be at a disadvantage in comparison with his contemporaries will continue to make his education a compromise between the traditionally correct thing, his own capacities and interests, and the demands of modern civilisation. In time we shall be able to strike a just balance between these conflicting claims, and while giving tradition its just share in education, we shall see the paramount advantage of shaping every youth's education in harmony with his innate interests and capacities and the demands of the civilisation of his own time. Our American secondary schools show this transition from mere adherence to tradition to a clearer conception of their true function. The programmes of secondary schools in the appendix to this paper will abundantly illustrate all these conflicting claims.

It is sometimes said that if a youth is allowed to choose his own studies he is not trained to work "against the grain." I am not sure that I understand the meaning attached to this phrase by those who use it. But, in my opinion, the only sense in which any sane person in adult life works "against the grain" is when he applies himself to some disagreeable or even repulsive task for the sake of some ultimate end that is intrinsically agreeable to him, or recognised as good by him. There is no other working against the grain worth cultivating. No one but an ascetic habitually does disagreeable things for their own sake.

When an adult works faithfully at a disagreeable task he does it primarily because it is clear to him that his personal interests are at stake—that his daily bread, or honour, or social elevation depends on the performance of his work, however disagreeable it may be. In other words, there are strong extraneous motives, the force of which he can appreciate, that cause him to apply himself to the uninviting or repelling task before him. True, many a man does live his life under just such disadvantageous conditions. But it is a life of mere drudgery from which he might have been saved if he had learned in youth to choose that calling which is in harmony with his dominant interests and capacities. His work might then have been hardly less delightful than his leisure; and he would, of course, have earned more leisure because of the increased efficiency of his work.

But can anyone with any knowledge of boy and girl nature assert that the faithful application to the positively and permanently uninteresting could be cultivated by extraneous motives even if it were desirable? The motives which appeal to the adult weigh but little with the adolescent. Moreover the boy or girl feels instinctively that consciousness was added to the equipment of mankind in the process of evolution—as a "super-added biological perfection"—for guidance, and must be used, so far as is possible, for that purpose. The remote reasons which apparently weigh heavily against his strong disinclination in the

minds of his governors do not and cannot appeal to him as intrinsically valid. One can, of course, compel the performance of disagreeable tasks, and by repetition of compulsion one can convince a refractory youth that *some* achievement is always both possible and necessary, in spite of his strong aversion to this or that kind of work. But what is cultivated in such circumstances is not increasing strength to master difficulties; it is rather the habit of skilful, even of subtle, evasion—the habit of calculating not how much one *can* do, but how little one *must* do.

Further, the effect of compelling a youth to pursue a subject permanently uninteresting is pernicious in another way. It cultivates in him the abominable habit of being satisfied with partial or inadequate achievement. Permanent lack of interest in a given field of work is an indication of corresponding incapacity; for growing interest and capacity always go together.

Under such circumstances a youth never feels the glow of conscious mastery of the subject for its own sake. Half-achievement is the result of forced, half-hearted endeavour, and both become the rule.

The result may be even worse. To be constantly baffled undermines confidence in one's own powers, and ultimately imperils self-respect. To force a youth to work against the grain for its own sake is, therefore, futile—or worse than futile. It not only fails to accomplish its purpose, but actually cultivates the evasion of school work and an aversion to school work. In extreme cases it may even destroy the capacity for work of any sort. Moreover, it must not be forgotten that evasion of work, aversion to work, and *ennui* form the fertile soil in which all the vices flourish.

Finally, all such effort to make a youth work “against the grain” for its own sake by the pursuit of uninteresting studies is artificial and wholly unnecessary. What we want a youth to acquire is the power of overcoming difficulties and the corresponding habit of adequate achievement. This power and the corresponding habit are cultivated *by overcoming difficulties*, not by forced and unsuccessful attempts at overcoming them. Every subject affords abundant opportunity for overcoming difficulties, and when it is in harmony with the pupil's interests and powers these difficulties will be overcome; first, because they lie in the way of further progress in a subject which he wishes to master, and second, because he possesses the requisite natural capacity for conquest. He will thus feel daily the sensation of achievement, the strongest of all incentives to exertion. Hence conquest may become the rule. Through conquest alone comes the habit of working in spite of difficulties; and this is the only kind of working against the grain that has any value.

Finally, as was pointed out above, a man's life is more significant and richer in every way, the more his dominant interests and powers determine both his serious pursuits and his refined pleasures. The natural preferences of pupils during the stage of secondary education should therefore be heeded, not thwarted. There is no other effective way to cultivate the habit of “working against the grain,” in the only sense in which such work is wise.

It is no argument to say that generations of men have been trained to work against the grain under rigidly prescribed programmes of study. The sufficient reply to such an argument is already contained in what has been said about the effect of extraneous motives in adult life. It may be added, therefore, that this capacity, where it exists, has been developed in spite of, not because of, the rigid prescription of studies.

PAUL H. HANUS.

Harvard University.  
November 1899.

[This paper was written in 1899, but its publication has been unavoidably delayed. It was suggested to Professor Hanus that he might wish to revise it, but, writing in September, 1901, he replied that the paper represents actual condition and his personal convictions almost now as well now as when originally composed.—Ed.]

## APPENDIX.

In this Appendix will be found a number of representative programmes of secondary schools in the United States. For the most part these programmes explain themselves. It may be necessary to state, however, that a Latin School is a Public High School whose programme is determined by the traditional requirements for admission to College. Since these requirements permit little freedom of choice as to the studies any pupil may pursue, comparatively little "election of studies" is allowed in these schools.

Latin Schools as such are peculiar to New England. So are English High Schools.

An English High School is a non-classical or a semi-classical school. Such schools offer no Greek, but always more or less Latin.

The most common type of public secondary school is the High School, which combines the instruction offered in the Latin school and the English High School. It also usually offers manual training and commercial training. There are, however, separate Manual Training High Schools, or Mechanic Arts High Schools, which are non-classical secondary schools with special development of the courses in manual training. Still another kind of High School is just emerging on our horizon, namely, the Commercial High School.

But the well-nigh universal form of our public secondary school is the High School, offering in its several departments the instruction peculiar to all the different kinds of High Schools.

No special explanations of endowed and private secondary school programmes are necessary, because the endowed and private schools merely parallel the work of the public secondary schools. Most of the private and endowed secondary schools are, however, Preparatory Schools, *i.e.*, schools that prepare pupils for college.

There is an important small class of endowed secondary schools of recent origin to which this statement does not apply. These are the so-called Institutes. They closely resemble the English Polytechnics.

Besides showing in detail the instruction provided in our secondary schools, the programmes which follow also indicate the way in which the election of studies is practically administered. See particularly the programmes of Somerville and Melrose, Mass., § 1 and 2.

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- § 1. Somerville, Mass. (a suburb of Boston), *English High School*.
  - § 2. Melrose, Mass. (a suburb of Boston), *High School*.
  - § 3. Medford, Mass. (a suburb of Boston), *High School*.
  - § 4. New York City *High School* (for both sexes together).
  - § 5. Ithaca, New York (the seat of Cornell University), *High School*.
  - § 6. Boston, Mass., *Latin Schools*.
  - § 7. Cambridge, Mass., *Latin School*.
  - § 8. Cambridge, Mass., The Rindge *Manual Training School* (now a part of the public school system).
  - § 9. Boston, *Mechanic Arts High School*.
  - § 10. Cambridge, Mass., "Browne and Nichols' School for Boys" (including a preparatory department.)
  - § 11. Cambridge, Mass., *Grammar Schools* (alternative divisions of Course of Study).
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§ 1. ENGLISH HIGH SCHOOL, SOMERVILLE (suburb of Boston), MASS.

NOTE.—English High Schools, as such, are peculiar to New England.

Extract from the Course of Study for 1899.

- (i.) There are fifteen prepared and five unprepared lessons in each week.
- (ii.) Of the fifteen prepared lessons, the course prescribes in the first year, *ten*; in the second, *eleven*; in the third and fourth, *seven*. Pupils have the privilege of selecting from among the "elective," or optional, studies, provided always that their selection entails, in the first year, *five prepared lessons*; in the second, *four*; in the third and fourth, *eight*. All elective



studies, with the exception of Drawing, Manual Training, Penmanship and Typewriting, entail prepared lessons.

(iii.) Pupils electing Manual Training must also elect Mechanical Drawing, although Mechanical Drawing may be elected without Manual Training.

(iv.) A pupil may select any elective of his own year or of the years which precede it. Only one foreign language may be begun in the same year. It should be continued two years at least; a longer time is strongly urged. There must be a sufficient number of pupils desiring a certain elective to warrant a class being formed in that subject.

(v.) No pupil will be permitted to take more than fifteen hours of prepared work, unless his scholarship and health warrant the increase.

(vi.) In June of each year pupils will be asked to choose electives for the following year. No change of courses will be allowed during the year, except for urgent reasons.

(vii.) The figures at the right of subjects in the Course of Study indicate the number of lessons given in each week.

	FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
	Required Studies.	Required Studies.	Required Studies.	Required Studies.
Prepared	English, 4 Ancient History, 2. Algebra, 4.	English, 4. Mediæval History, 3. Geometry, 4.	English, 4. English and Modern European History, 3.	English, 4. United States History and Civics, 3.
Unprepared	Elocution, 1. Ethics, 1. Freehand Drawing, 2. Music, 1. Physical Training, 1.	Elocution, 1. Ethics, 1. Music, 1. Physical Training, 1.	Elocution, 1. Ethics, 1. Music, 1. Physical Training, 1. Physiology.	Elocution, 1. Ethics, 1. Music, 1. Physical Training, 1. Physiology, 1.
	Elective Studies.	Elective Studies.	Elective Studies.	Elective Studies.
Science	Botany, 5*. Zoology, 5*.	Physics, 5.	Chemistry, 5.	Advanced Botany, 5*. Advanced Chemistry, 5. Advanced Physics, 5. Advanced Zoology, 5*. Astronomy, 5*. Geology, 5*. Physical Geography 2.
Mathematics.	None.	None.	Advanced Algebra, 5*. Advanced Geometry, 5*.	Analytical Geometry, 2. Solid Geometry, 5*. Trigonometry, 5*.
Commercial Studies.	None.	None.	Bookkeeping, 5. Commercial Arithmetic, 2. Penmanship, 2. Stenography, 5. Typewriting, 3.	Bookkeeping, 5. Commercial Law, 2. Stenography, 5. Typewriting, 3

\* These studies may be pursued for half the year only.

(viii.) Besides the elective studies given in this scheme, there are also two further groups of "electives," viz.: Language, and Manual Training and Drawing.

(a.) In the language group, French, German and Latin are on an equal footing in respect of the number of lessons given each week. Five lessons a week are given in each of these languages during the first year, and four lessons a week during the three succeeding years.

(b.) In the "Manual Training" group there are three subjects: manual training (six lessons a week), freehand drawing (two lessons a week), and mechanical drawing (three lessons a week). This proportion among the three subjects is maintained throughout, except that in the first year the two lessons a week given to freehand drawing are not "elective" but "required."



## ARTICLE IV. — STUDY.

### SECTION 1. — GENERAL PRINCIPLES.

1. The studies to be taken in the various grades are as follows:

Fourth Class	Third Class	Second Class	First Class
Required Studies	Required Studies	Required Studies	Required Studies
English. Spelling. Arithmetic. Reading.	English. Spelling.	English. Spelling.	English. Spelling.
Elective Studies	Elective Studies	Elective Studies	Elective Studies
Latin. History & Geography. Science.	Latin. Greek. French. German. American History.	Latin. Greek. French. German. History & Geography.	Latin. Greek. French. German. History & Geography. United States History. Physical Science. Political Science. College Hist. Review.
Penmanship.	Commercial Arithmetic and Correspondence. Penmanship. Drawing.	Bookkeeping. Stenography. Drawing.	Bookkeeping. Stenography. Typewriting. Commercial Law. Drawing.

2. There is also a group of elective studies in natural science. Among the subjects to be pursued for a whole year are elementary physics (four elementary four and advanced four) chemistry, and physiology (two). There are also certain science studies which are pursued for the half-year only, viz. —

Fourth class	Physiology, 1st half-year.
	Botany, 2nd half-year.
First class	Geology, 1st half-year.
	Astronomy, 2nd half-year.

3. The mathematical studies are as follows —

Fourth class	Required—Algebra, 1.
Third class	Elective—Geometry, 1.
Second class	Elective—Geometry, half-year, 1. Algebra, half-year, 1.
First class	Elective—Solid Geometry, 3.

4. Any pupil may select from the electives of his own year and from those of the year or years preceding. A sufficient number of pupils must select any elective, or a class in that subject will not be formed.

5. Regular courses for pupils preparing for college or for scientific or normal schools will be designated by the principal. He will confer with pupils of the high school and with any parents who may wish to consult him.

6. The number of hours of the elective studies added to the number of hours of the required studies should equal sixteen hours or more of work. Each pupil is requested to place against each study in his list the Roman numeral I, II, III, or IV, the numeral indicating the class in which the study taken occurs; thus French, II, means French in the second class, and German, I, means German in the first or senior class.

7. No change of courses or studies will be allowed during the year, except for urgent reasons, and then only by permission of the Principal.

§ 3. HIGH SCHOOL, MEDFORD (Suburb of Boston), MASS.

COURSE OF STUDY.

(i.) NOTE.—Elective studies are printed in *italics*. The numbers opposite the subjects give the number of lessons per week in those subjects.

—	CLASSICAL.	MODERN LANGUAGE.	ENGLISH.
1st Year	English . . . . 5 Roman History . . . 3 Algebra . . . . 5  Latin . . . . . 5 Physiology . . . . 1  19	English . . . . . 5 English History . . . 3 Algebra . . . . . 4 <i>French</i> 4 } . . . . 4 <i>German</i> 4 } . . . . 4 <i>Physics</i> 3 } . . . . 3 <i>Botany</i> 3 } . . . . 3  19	English . . . . . 5 English History . . . 3 Algebra 4 } . . . . 6 Geometry 2 } . . . . 6  Physics . . . . . 2 Botany . . . . . 3  19
2nd Year	English . . . . . 2 Greek History . . . . 3  Geometry . . . . . 5 Latin . . . . . 5 Greek . . . . . 5  20	English . . . . . 5 History and Civil Gov- 3 ernment. Geometry . . . . . 3  <i>French</i> 5 } . . . . 5 <i>German</i> 5 } . . . . 5 Zoology and Physiology 3  19	English . . . . . 5 History and Civil Gov- 3 ernment. Geometry 3 } . . . . 5 Book-keeping and 2 } . . . . 5 Arithmetic. } Zoology and Physiology 3 <i>Manual Training</i> 3 } 3 <i>Freehand Drawing</i> 3 } 3  19
3rd Year	English . . . . . 3 History review . . . . 1 Mathematics . . . . . 2 Latin . . . . . 5  Greek . . . . . 5 <i>French</i> 4 } . . . . 4 <i>German</i> 4 } . . . . 4  20	English . . . . . 5 History (Ancient) . . . 4  <i>Advanced French</i> 5 } . . 5 <i>Advanced German</i> 5 } . . 5 <i>French</i> 5 } . . . . 5 <i>German</i> 5 } . . . . 5 <i>Chemistry</i> 5 } . . . . 5 <i>Geology</i> 5 } . . . . 5  19	English . . . . . 5 History (Ancient) . . . 4 <i>French</i> 5 } . . . . 10 <i>German</i> 5 } . . . . 10 <i>Book-keeping</i> 2 } . . . . 10 <i>Chemistry</i> 5 } . . . . 10 <i>Geology</i> 5 } . . . . 10 <i>Manual Training</i> 3 } . . . . 10 <i>Freehand Drawing</i> 3 } . . . . 10  19
4th Year	English . . . . . 2 Greek . . . . . 5 Latin . . . . . 4 <i>French</i> 4 } . . . . 4 <i>German</i> 4 } . . . . 4 Physics . . . . . 4 <i>Advanced French</i> 4 } . . 4 <i>Higher Algebra</i> 2 } . . 4 <i>Trigonometry and</i> 2 } . . 4 <i>Surveying</i> . . . . 2 } . . 4  23	English . . . . . 5 History Med. and Mod. 4 <i>Advanced French</i> 4 } . . 4 <i>Advanced German</i> 4 } . . 4 <i>French</i> 4 } . . . . 6 <i>German</i> 4 } . . . . 6 <i>Physics</i> 4 } . . . . 6 <i>Astronomy</i> 2 } . . . . 6 <i>Advanced Chemistry</i> 2 } . . . . 6 <i>Advanced Biology</i> 2 } . . . . 6  19	English . . . . . 5 History Med. and Mod. . 4 <i>Stenography and</i> 4 } . . . . 10 <i>Type-writing.</i> } . . . . 10 <i>French</i> 4 } . . . . 10 <i>German</i> 4 } . . . . 10 <i>Physics</i> 4 } . . . . 10 <i>Astronomy</i> 2 } . . . . 10 <i>Advanced Chemistry</i> 2 } . . . . 10 <i>Advanced Biology</i> 2 } . . . . 10  19

(ii.) In addition to these studies, singing, composition, military drill for boys, and calisthenics for girls, will be required throughout the course; declamation will be required of pupils in the third and fourth years; drawing, when not specially designated in the course, will be elective.

(iii.) The number of pupils required to form a division in an elective study will be 25 in the first year, 20 in the second year, 15 in the third year, and 10 in the fourth year.

In case there are not pupils enough to form a division, another elective study must be chosen.

(iv.) Pupils will not be permitted to change courses or to include studies not in the course they have chosen without the consent of the head master and superintendent.

Permission to pursue additional studies will be granted to competent pupils, upon the request of parent or guardian, and with the consent of the head master; but the programme of Required and Elective Subjects will not be interfered with to enable any pupil to pursue studies not included among these.

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(v.) NOTE — Elective studies are printed in italics. The numbers opposite the titles of subjects give the number of lessons per week.

	GRAMMAR	Latin-Scientific
First Year.	English - - - - - 5 Roman History - - - - - 3 Algebra - - - - - 3 Latin - - - - - 4 Drawing - - - - - 1 Physiology - - - - - 1 19	English - - - - - 5 English History - - - - - 3 Algebra - - - - - 4 Latin - - - - - 4 Physics - - - 3 ) Botany - - - 3 ) - - - 3 19
Second Year.	English - - - - - 3 Greek History - - - - - 3 History and Civil Government - - 3 Geometry - - - - - 3 Latin - - - - - 4 or 3 Latin and Zoology - - - - - 4 or 3 Manual Training - - - - - 3 19 or 19	English - - - - - 5 History and Civil Government - - 3 Geometry - - - - - 3 Latin - - - - - 5 Zoology and Physiology - - - - 3 19
Third Year.	English - - - - - 3 History review - - - - - 1 Mathematics - - - - - 2 Latin - - - 5 ) Chemistry - - - 5 ) French - - - 5 ) German - - - 5 ) Freehand Drawing - - - - - 3 19	English - - - - - 5 History (Ancient) - - - - - 4 Latin - - - - - 5 French - - - 5 ) German - - - 5 ) Chemistry - - - 5 ) Geology - - - 5 ) 19
Fourth Year.	English - - - - - 3 Solid Geometry - - - - - 2 Latin - - - - - 2 History, Mod. and Mod. - - - - 2 French - - - - - 4 German - - - - - 4 Physics - - - - - 4 Advanced French - - - - - 4 Higher Algebra - - - - - 2 ) Trigonometry & Surveying - - 2 ) 20	English - - - - - 5 History, Mod. and Mod. - - - - 4 Latin - - - - - 4 French - - - - - 4 German - - - - - 4 Physics - - - - - 4 Astronomy - - - - - 2 Advanced Chemistry - - - - - 2 Advanced Biology - - - - - 2 19

- (vi.) All the courses of study are designed to be equivalent or nearly equivalent in educational value, though varying widely in their adaptation to the wants of different pupils.
- (vii.) The classical course is designed especially for pupils destined for college. As it necessarily omits studies essential to information and good citizenship, it is not suitable for those whose studies are to end at the high school.
- Pupils who have found it difficult to keep pace with their classes in the grammar school are strongly advised not to take this course.
- (viii.) The modern languages course is recommended to pupils who are to attend school less than four years; and the English course to those who will leave school at the end of one year.
- (ix.) The number of lessons in each week is nineteen, of which not more than sixteen are to be prepared lessons.

§ 4. HIGH SCHOOL FOR GIRLS AND BOYS, NEW YORK CITY.

Proposed courses of study for 1897-98.

a. General Course b. Commercial Course. c. Classical Course.

a. (i.) The maximum number of prescribed lessons per week to be prepared is twenty.

(ii.) It is expected that the girls will take sewing once a week the first year, and cooking once a fortnight the second year.

(iii.) NOTE.—The numbers indicate the number of lessons given in each subject during one week.

GENERAL COURSE.

	Required Subjects.	Elective Subjects.
First Year	English . . . . . 3	Latin . . . . . 4
	History . . . . . 2	French . . . . . 4
	Physiology . . . . . 2	German . . . . . 4
	Algebra . . . . . 3	Spanish . . . . . 4
	Drawing . . . . . 1	Biology . . . . . 4
	Physical Training . . . . . 2	Two Electives required.
	Music . . . . . 1	
	14	
Second Year	English . . . . . 3	Latin . . . . . 4
	History . . . . . 2	Greek . . . . . 4
	Physics . . . . . 3	French . . . . . 4
	Geometry . . . . . 3	German . . . . . 4
	Drawing . . . . . 1	Spanish . . . . . 4
	Physical Training . . . . . 2	Physiography . . . . . 4
	Music . . . . . 1	Two Electives required.
	15	
Third Year	English . . . . . 3	Latin . . . . . 4
	History . . . . . 2	Greek . . . . . 4
	Civics . . . . . 2	French . . . . . 4
	Drawing . . . . . 1	German . . . . . 4
	Physical Training . . . . . 2	Spanish . . . . . 4
	Music . . . . . 1	Chemistry . . . . . 4
		Algebra and Plane Geometry . . . . . 4
		English . . . . . 4
		History . . . . . 4
		Art . . . . . 4
	11	Economics and Astronomy . . . . . 4
		Three Electives required.
Fourth Year	English . . . . . 3	Latin . . . . . 4
	History . . . . . 2	Greek . . . . . 4
	Drawing . . . . . 1	French . . . . . 4
	Physical Training . . . . . 2	German . . . . . 4
	Music . . . . . 1	Spanish . . . . . 4
		Physics . . . . . 4
		Solid Geometry and Plane Trigonometry . . . . . 4
		English . . . . . 4
		History . . . . . 4
		Art . . . . . 4
	9	Psychology and Ethics . . . . . 4
		Four Electives required.

The General Course is designed to meet the requirements of the College of the City of New York and of the Normal College, and the demands of that large class of boys and girls whose school life is to end with the secondary school. It seems desirable, therefore, that it should recognise two classes of subjects, one including those deemed essential in every well ordered system of secondary education, the other comprising a large list of electives so grouped as to constitute a curriculum that shall be both elastic and comprehensive.

(iv.) Pupils electing any foreign language must pursue that study continuously for two years at least.

(v.) No class in an elective subject shall be formed for less than 25 pupils in the first year, for less than 20 pupils in the second year, for less than 15 pupils in the third, for less than 10 pupils in the fourth year.

(b.) NOTE.—The numbers indicate the number of lessons given in each subject during one week.

(i.)—COMMERCIAL COURSE.

FIRST YEAR.		SECOND YEAR.	
English . . . . .	3	English . . . . .	3
History . . . . .	2	History . . . . .	2
Physiology . . . . .	2	Physics . . . . .	3
Algebra . . . . .	3	Geometry . . . . .	3
Drawing . . . . .	1	Drawing . . . . .	1
Physical Training . . . . .	2	Physical Training . . . . .	2
Music . . . . .	1	Music . . . . .	1
French or German or Spanish . . . . .	4	French or German or Spanish . . . . .	4
Biology . . . . .	4	Book-keeping and Arithmetic . . . . .	4
	22		23
THIRD YEAR.		FOURTH YEAR.	
English . . . . .	3	English . . . . .	3
History . . . . .	2	History . . . . .	2
Civics . . . . .	2	Physical Training . . . . .	2
Drawing . . . . .	1	Music . . . . .	1
Physical Training . . . . .	2	French or German or Spanish . . . . .	4
Music . . . . .	1	Commercial Law and History of Commerce . . . . .	4
French or German or Spanish . . . . .	4	Stenography and Typewriting . . . . .	4
Book-keeping and Arithmetic . . . . .	4	English Composition . . . . .	4
Stenography and Typewriting . . . . .	4		24 *
	23		

\* There are no lessons in the Fourth Year in Drawing, Natural Science, or Mathematics.

(ii.) The Commercial Course is made up of two classes of subjects. The first class is identical with the required subjects of the General Course (see above) and is designed to furnish the student with a substantial foundation of general training ; the second class is intended to supply the pupil with such technical knowledge of book-keeping, commercial law, &c., as will enable him to meet the demands of ordinary business life.

(iii.) The following points in the Commercial Course may here be noted :—

- Natural Science.*—*First Year:* Physiology and Biology. *Second Year:* Physics.
- Political Science and Economy.*—*Third Year:* Civics. *Fourth Year:* Commercial Law and History of Commerce.
- Mathematics.*—*First Year:* Algebra. *Second Year:* Geometry.
- English Composition.*—*Fourth Year only.*

c. (i.)—NOTE.—The numbers indicate the number of lessons given in each subject during one week.

CLASSICAL COURSE.

FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
English . . . 3	English . . . 3	English . . . 3	English . . . 3
Latin . . . 5	Latin . . . 5	Latin . . . 5	Latin . . . 5
	Greek or French or German . . . 5	Greek or French or German . . . 5	Greek or French or German . . . 5
Algebra . . . 5		Algebra . . . 3	
History . . . 2	History . . . 2	History . . . 2	
Elementary French or German . . . 4	Elementary French or German . . . 2	Elementary French or German . . . 2	
	Geometry . . . 3		Geometry . . . 2
			Physics or Chemistry 5
Physical Training . 2	Physical Training . 2	Physical Training 2	Physical Training . 2
Total . . . 21	Total . . . 22	Total . . . 22	Total . . . 22

(ii.) The Classical Course is framed to meet the requirements of admission to the largest colleges in the country.

§ 5. HIGH SCHOOL, ITHACA, N.Y.  
(The seat of Cornell University).  
Courses of Study for 1897—1898.

(i.)—CLASSICAL COURSE, preparatory to the College Course leading to the degree of A.B.

—	FIRST HALF.	SECOND HALF.
First Year .	Elementary Latin . . . United States History . . . Algebra . . .	Elementary Latin. English Composition. Algebra.
Second Year	Cæsar or Nepos . . . Elementary Greek . . . Plane Geometry . . .	} With Civics added.
Third Year .	Virgil . . . Anabasis . . . Physiology . . .	Virgil. Anabasis. Rhetoric.
Last Year .	English Literature. Cicero. Homer.	American Literature. Any Science. Greek History.

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(ii.) *LATIN ACADEMIC COURSE*, preparatory to the College Course leading to the degree Ph.B.

	FIRST HALF.	SECOND HALF.
First Year	Elementary Latin. United States History. Algebra.	Elementary Latin. English Composition. Algebra.
Second Year	Cesar or Nepos. Plane Geometry. Civics.	} —
Third Year	Virgil French and German Physion., Part I.	
Fourth Year	English Literature. French or German. Civics.	American Literature. French or German. Greek History.

(iii.) Academic course, which can be so changed by election as to prepare for the college course leading to the degree of M.E., E.E., C.E., B.S., or Architecture.

NOTE. (1.) It is urgently recommended that all expecting to take this course begin the study of Latin in the first year. (2.) English or American selections may be substituted for either English or American literature and the course of three years in English may be substituted for English and American literature, rhetoric and English composition.

	FIRST HALF.	SECOND HALF.
Ninth Year	Algebra. United States History. Latin, 1st year. Drawing.	Algebra. English Composition. Latin, 1st year. Drawing, advanced.
Tenth Year	English, advanced. English, 1st year. Plane Geometry. Physiology. Physical Geography. Cesar (Nepos). Greek, 1st year. German, 1st year. Geology. Astronomy.	United States History, advanced English, 1st year. Plane Geometry. Rhetoric. Civics. Cesar (Nepos). Greek, 1st year. German, 1st year. Bookkeeping. Botany.
Eleventh Year	English, 2nd year. Physics, Part I. Solid Geometry. Virgil. Astronomy. French, 1st year. German, 2nd year. English, 2nd year.	English, 2nd year. English History. Physics, Part I. Virgil. French, 1st year. German, 2nd year. English, 2nd year. Astronomy, 1st quarter.
Twelfth Year	English Literature. French, 2nd year. Civics. English, advanced. Astronomy.	Greek Composition, 2nd quarter. American Literature. French, 2nd year. Civics. English History. Plane and Spherical Trigonometry. Greek and Roman History.



(iv.) Some features of the Commercial Course (*three years*) Algebra, Drawing, and United States History, *first half of first year.* Algebra, and English Composition, *second half of first year.*

—	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.
Second year	Mental Arithmetic. Penmanship. English Reading. <i>English, 2nd year.</i>	Commercial Arithmetic. Penmanship. English Reading. <i>English, 2nd year.</i>	Bookkeeping. Physiology. Rhetoric. <i>English, 2nd year.</i>	Bookkeeping Physiology. Rhetoric. <i>English, 2nd year.</i>

—	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.
Third year	Penmanship. Mental Arithmetic. Civics.	Penmanship. Commercial Arithmetic. Civics.	Typewriting. Business correspondence. Bookkeeping, adv.	Typewriting. Commercial law. Bookkeeping, adv.

#### § 6. LATIN SCHOOLS, BOSTON MASS.

NOTE.—Latin schools, as such, are peculiar to New England.

(i.) Session.—Five hours a day five days of the week. Of these five hours a quarter of an hour is given to opening exercises, and half an hour to recesses.

The average length of an hour is 50 minutes. (This makes the actual working period for each day a little over 3½ hours.)

(ii.) Study out of school.—Three lower classes not more than 10 hours a week; three upper classes not more than 12 hours per week.

(iii.) Of the twenty-five school “hours” in a week, twenty hours—four each day—are given to class exercises, and five hours—one each day—to study (preparation).

Out of twenty class exercises not more than fifteen will be prepared.

(iv.) Moral training.—A part of the time assigned to the opening exercises will be used in giving instruction in morals and manners. Teachers will at all times “exert their best endeavours to impress on the minds of children and youth committed to their care and instruction, the principles of piety and justice, and a sacred regard to truth; love of their country, humanity, and universal benevolence; sobriety, industry, and frugality; chastity, moderation, and temperance; and those other virtues which are the ornament of human society, and the basis upon which a republican constitution is founded.”—*Extract from the General Statutes of Massachusetts.*

(v.) Pupils may, for good and sufficient reasons, be allowed by the principal to spend more than six years in completing the regular course of study, and, with his consent, may omit one or more studies.

(vi.) Teachers will guard the health of their pupils; or, better, will instruct them how to observe the laws of life and health. Sound advice with regard to diet, ventilation, exercise, rest, dress, and regular hours will be given; and the requirements of the following law of this State will be observed: “Physiology and hygiene, which, in both divisions of the subject, shall include special instruction as to the effects of alcoholic drinks, stimulants, and narcotics on the human system, shall be taught as a regular branch of study to all pupils in all schools supported wholly or in part by public money, except special schools maintained solely for instruction in particular branches.”

(vii.) There are six classes, the highest of which is Class I,

The bare outline of the curriculum is as follows :—

*Note.*—The numbers indicate the number of lessons given in each subject during one week.

Class VI. (lowest class) -	English (including History)	-	6
	Latin - - - - -	-	5
	Geography - - - - -	-	2
	Elementary Science - - -	-	1½
	Mathematics - - - - -	-	4½
	Physical Training and Singing	-	2
			21*

Class V. - - - - -	English (including History)	-	6
	Latin - - - - -	-	5
	Geography - - - - -	-	2½
	Elementary Science - - -	-	1½
	Mathematics - - - - -	-	4
	Physical Training and Singing	-	2
			20*

Class IV. - - - - -	English (including History)	-	5
	French or German - - -	-	3½
	Latin - - - - -	-	5
	Elementary Science - - -	-	1½
	[Astronomical and Physical Geography ; then Botany, inductively studied].		
	Mathematics - - - - -	-	4
			21*

Class III. - - - - -	English (including History)	-	4
	French or German - - -	-	2
	Latin - - - - -	-	4
	Greek - - - - -	-	5
	Mathematics (mainly Algebra)	-	3
	Physical Training and Singing	-	2
			20†

Class II. The division of the 20 hours† is precisely the same in Class II. as in Class III., though the subjects are of course treated in a more advanced way.

Class I. - - - - -	English - - - - -	-	2
	Latin - - - - -	-	4
	Greek - - - - -	-	4½
	Elementary Science (Physics, inductive and experimental)	-	3½
	Mathematics (Plane Geometry)	-	4
	Physical Training and Singing	-	2
			20†

\* In addition to these lessons pupils give in each week five hours to preparatory study, and "not more than ten" to study out of school.  
† In addition to these lessons pupils give in each week five hours to preparatory study, and "not more than twelve" to study out of school.

(viii.) Some idea of the method of teaching pursued may be given by these extracts.

*a.* Class VI.—Latin : Five hours a week. 1. Regular forms, with simple exercises illustrating their use. 2. (*a*) Oral and written translation of easy Latin into English. (*b*) Unprepared translation of easy Latin with the help of the teacher. 3. (*a*) Reading aloud, copying, and writing from dictation Latin simple in construction and composed of words familiar to the pupils. (*b*) Simple oral and written translation of English into Latin.

*b.* Class V.—Mathematics : Four hours a week. 1. Arithmetic : Three and one-half hours a week. Oral exercises with simple numbers, arithmetic at sight, and written arithmetic : *a.* Application of the principles of percentage to bank discount, partial payments, and compound interest. (*b*) Compound numbers, with simple practical problems. (*c*) Ratio and proportion. (*d*) Powers ; square root and its common applications ; cube root with simple practical problems. 2. Geometry : One-half hour a week. Objective geometry, including the mensuration of the parallelogram, triangle, trapezoid, trapezium, circle, and any other plane figure divisible into triangles ; of the right prism, pyramid, cylinder, and cone ; and of the sphere.

*c.* Class IV.—History. Reading Plutarch's Lives of Famous Greeks ; reading descriptions of and studying the great events in the history of Ancient Greece ; and making oral and written reproductions or abstracts of the same.

NOTE.—Pupils in Class IV. are old enough to begin to appreciate causes and consequences of historical events, and to form clear conceptions of the lives of the people whose history they are reading. Teachers should use statuary, paintings, engravings, photographs, and other available historic illustrations (at the Art Museum and elsewhere), and should read to the pupils, or cause them to read, such extracts from standard historical writers as distinctly and vividly portray famous men and events.

*d.* Class III.—Greek : Five hours a week. 1. Forms with simple exercises illustrating their use. 2. (*a*) Oral and written translation of easy Greek into English. (*b*) Oral translation of, at least, a Part of Book I. of the Anabasis. (*c*) Unprepared translation of easy Greek, with the help of the teacher. 3. (*a*) Reading aloud, copying, and writing from dictation Greek simple in construction and composed of words familiar to the pupils. (*b*) Simple oral and written translation of English into Greek, including exercises based upon passages from Book I. of the Anabasis.

NOTE.—That pupils may, early in the course, acquire some knowledge of the Greek language as a foundation for their study of its formal grammar, they should read aloud and should hear the teacher read much connected Greek, and should, with his help, translate it into English. They would thus gradually learn, through ear and eye, changes in the forms of words and, through the understanding, the force of these changes ; and at the same time, interested in the connected narrative, would gain daily in the power of translating readily Greek into English.

*e.* Class II.—French or German : Two hours a week. 1. (*a*) Reading aloud, without translating into English, some easy French or German prose. (*b*) Conversations based on this French or German. (*c*) Reproduction of stories or of other simple French or German heard or read by the pupils. 2. (*a*) Oral and written translations into English of some modern French or German prose and poetry suited to the progress of the class ; also, of one or more French or German classics. (*b*) Unprepared translation of easy and average passages from French or German into English. 3. (*a*) Study of irregular forms and unfamiliar constructions, with exercises thereon. (*b*) Translation of English into French, including oral and written exercises based upon passages selected from the authors studied.

NOTE.—(1.) To translate readily French or German into idiomatic English, and (2) to acquire and appreciate the author's thoughts through reading the foreign language without translating it into English, are the two main

Objects of study in the Latin schools. While accomplishing these objects, the pupils should acquire a correct pronunciation and a familiarity with forms and syntax, and should begin to compose and converse in the foreign language.

*f.* Class I.—English: Two hours a week. 1. (a) Reading aloud or silently the English literature required for admission to college. (b) Oral and written abstracts and interpretations of the same. 2. (a) Committing to memory and reciting selections from standard authors of prose and poetry. (b) Exercises for cultivating correct and expressive utterance. 3. (a) Compositions. (b) Some critical study of standard English prose as to correctness, propriety, perspicuity, and force; and exercises for training pupils to correct their own mistakes in speaking and writing.

(ix.) There is practically no "election of studies" until Class I. is reached. In this class pupils who have special needs will be allowed, if the circumstances of the school permit and the head-master consent, (a) to substitute the history of the United States and of England for the history of Greece and of Rome; (b) to substitute solid geometry (or the elements of analytic geometry, or advanced algebra, or logarithms and plane trigonometry with its applications to surveying and navigation) for Greek composition; (c) to substitute advanced French, or advanced physics, or advanced mathematics for advanced Greek; (d) to substitute in the boys' school elementary German for that part of advanced Latin or advanced Greek studied by Class I.; (e) to substitute elementary German and solid geometry, or any other of the branches of mathematics mentioned in (b), for advanced Greek and (f) to "anticipate" studies of the Freshman year.

	1½ hours	Sixth class
	1½ "	Fifth "
(x.) Elementary Science	1½ "	Fourth "
	None.	Third and second class
	3½ hours	First class

(xi.) Girls' "Latin school," under the Boston School Committee. Course of study in advanced German.

Advanced German: Four and one-half hours a week. 1. (a) Translating into English German prose and poetry suited to the progress of the class, including two or more German classics. (b) Sight translation of German into English. (c) Committing to memory and reciting German poetry. (d) Reading aloud, without translating into English, German prose of ordinary difficulty. (e) Conversation in German upon this prose. 2. Review of German grammar, a German text-book in grammar to be used and the recitations to be conducted in German. 3. Free composition in German, including compositions on subjects drawn from German books previously read.

#### § 7. LATIN SCHOOL, CAMBRIDGE, MASS.

The course of study for this school is arranged to meet the requirements for admission to Harvard College.

##### FIFTH CLASS. (Tenth Grade.)

Latin, every day during the year.

Algebra, every day during the year.

Physiology and Hygiene, every other day the first four months.

History of England, every other day the last six months.

English, every other day during the year. Daily practice in writing English.

##### FOURTH CLASS. (Eleventh Grade.)

Latin, every day during the year.

French, four times a week during the year.

or,

German, four times a week during the year.

Geometry, every day the first six months.

Greek and Roman History, every day the last four months.

English, one exercise a week for the year. Reading of books required for admission to Harvard College. Theme writing twice a week.

THIRD CLASS. (Twelfth Grade.)

Latin, four times a week during the year. The *Æneid*, Books I., II., III., IV.

Greek, every day during the year. Chapters I., II., III., of Book I. of the *Anabasis*. (Instead of Greek, pupils can take German or French; those who have had French in the fourth class take German; and those who have had German in the fourth class take French.)

French or German, every other day during the year.

Physics or Chemistry, every other day during the year.

English, once a week during the year. Reading of books required for admission to Harvard College. Theme writing twice a week.

SECOND CLASS. (Thirteenth Grade.)

Latin, every day during the year. The *Æneid*, Books V., VI., VII., VIII.; *Nepos's Lives*; *Sallust's Catiline*, forty exercises; Latin grammar. Written exercises in Latin, once a week.

Greek, every day during the year. Written exercises in Greek or Grammar once a week the last four months.

French, every other day during the year. French composition; French grammar; sight reading

or

German, every other day during the year.

Physics or Chemistry every other day during the year.

Ancient History, Greece and Rome, every other day during the year.

Algebra, every other day during the year.

English. Reading of books required for admission to Harvard College. Written essays.

FIRST CLASS. (Fourteenth Grade.)

Latin, every day during the year. The *Æneid*, Books IX., X., XI., XII.; and the *Bucolics* and the *Georgics*; *Cicero*, twelve orations, of which two are at sight. Written exercises twice a week during the year in Latin composition.

Greek, every day during the year. *Homer*, Books I., II., III., IV., entire. Written exercises once a week.

Geometry, every other day during the year.

Trigonometry and Solid Geometry (elective), every other day during the year.

English, every other day during the year. This includes reading (for the first time, or in review) the books in English required for admission to Harvard College.

NOTE.—This course of study gives, for the second class, four recitations a day during the week; for the third class, three or four recitations; and for the first, fourth, and fifth classes, three recitations a day. The extra time assigned to the second class is necessary for a proper preparation for the requirements in the preliminary examination for admission to Harvard College.

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§ 8. THE RINDGE MANUAL TRAINING SCHOOL (now a part of the public school system), CAMBRIDGE, MASS.

(i.) The course of instruction covers four years. An effort is made to give proper emphasis to the academic features of the course, and to make that work interesting and effective by bringing it into intimate relation with instruction in the mechanic arts.

The manual dexterity and the thorough knowledge of tools, machinery, and mechanical processes acquired in the shops, at an age when time can be most easily spared for such training, is of inestimable value in any scientific pursuit.

(ii.)

**FOURTH CLASS**

	Hours per Week.	Months per Year.
Elementary Algebra . . . . .	5	10
English . . . . .	5	10
English History . . . . .	3	7
Physiology . . . . .	3	3
Supervised Study, Algebra . . . . .	2	10
Drawing ) . . . . .	10	10
Shopwork ) . . . . .	5	10
Study . . . . .		

**THIRD CLASS**

	Hours per Week.	Months per Year.
French . . . . .	5	10
Geometry . . . . .	3	10
English . . . . .	2	10
Drawing . . . . .	5	10
Shopwork . . . . .	10	10
Study . . . . .	5	10

**SECOND CLASS**

College Course.	Hours per Week.	Months per Year.	General Course.	Hours per Week.	Months per Year.
Algebra and Geometry . . . . .	5	10	Physics . . . . .	5	10
French . . . . .	5	10	French . . . . .	5	10
English ) . . . . .	5	10	English ) . . . . .	5	10
and ) . . . . .			and ) . . . . .		
History ) . . . . .			History ) . . . . .		
Drawing ) . . . . .	10	10	Drawing ) . . . . .	10	10
Shopwork ) . . . . .			Shopwork ) . . . . .		
Study . . . . .	5	10	Study . . . . .	5	10

**FIRST CLASS**

College Course.	Hours per Week.	Months per Year.	General Course.	Hours per Week.	Months per Year.
Advanced French . . . . .	5	10	Chemistry . . . . .	5	10
English . . . . .	5	10	Physics . . . . .	3	10
Solid Geometry ) . . . . .			Civil Government . . . . .	5	10
Physics . . . . .	10	10	English . . . . .	5	10
Drawing ) . . . . .	5	10	Drawing ) . . . . .	10	10
Shopwork ) . . . . .			Shopwork ) . . . . .		
Study . . . . .	5	10	Study . . . . .	5	10

(iii.) *a.* At the beginning of the third year a choice is offered between the college course designed for boys fitting for higher scientific schools, and the general course for those who do not intend to enter the higher schools.

*b.* The course in civil government follows Fiske's Civil Government as a text-book, but it is also intended to give the boys an insight into the practical working of our municipal and state methods, by visits to the city hall and to the state house, and by the careful watching of current events.

§ 9. MECHANIC ARTS HIGH SCHOOL, BOSTON, MASS.

(i.) COURSE OF STUDY.

N.B.—This course of study represents the work pursued at the present time in the Mechanic Arts High School. It is not to be regarded as a permanent course, but simply as a trial course which is subject to change at any time.

FIRST YEAR.

Academic.	Hours per Week.	Months.	Mechanic Arts.	Hours per Week.	Months.
Algebra . . .	5	10	Drawing . . .	5	10
General History (alter- nate days).	2½	10	Carpentry . . .	10	7
English (alternate days).	2½	10	Wood-carving . .	10	3

SECOND YEAR.

	Hours per Week.	Months.
Algebra - - - - -	2½	10
Plane Geometry - - - - -	5	10
History of the United States. Civil Government (alternate days) - -	2½	10
English - - - - -	2½	10
French - - - - -	2½	10
Drawing (alternate days) - - - -	2½	1
Wood-turning, pattern-making - -	10	5
Forging - - - - -	10	5



THIRD YEAR.

	Hours per Week.	Months.
Solid Geometry - - - -	5	5
Plane Trigonometry - - -	5	5
Physics (alternate days) - - - -	2½	10
English (alternate days) - - - -	2½	10
French - - - - -	5	10
Drawing (alternate days) - - -	2½	10
Machinists' work		
Hand tools - - - - -	10	3
Machine tools - - - - -	10	7

(ii.) The following extracts give some idea of the purpose of the foregoing course of study, in so far as it is "academic" (i.e., liberal) as opposed to mechanic" (i.e., technical).

The main purpose of the mathematical course is to give pupils clear notions of the value and convenience of mathematical processes in the investigation of practical problems.

Algebraic methods are employed in the solution of such problems as are found in the study of physical sciences, and in the mechanical departments of the school.

The work in trigonometry is designed to familiarise the student with the fundamental principles and formulæ that are constantly used in surveying, mechanics, physical science, and the higher mathematics.

The course in history and civil government consists of a rapid survey of general history, followed by a study of the history of England, with special reference to its influence upon the colonial period in America. The instruction aims to trace clearly the growth of the principles of free self-government in England and their development when transplanted into America ; to give clear notions of the character and functions of the colonial government, and of the municipal, state, and federal governments of the present day.

The instruction in English aims to cultivate a taste for good literature, and the course is largely determined by the requirements for admission to New England colleges. The careful study of the authors read serves to awaken a genuine interest in literature, to raise the standard of reading and thinking, and to improve the literary taste. This work in literature is supplemented by exercises whose merits, rather than defects, are emphasised for improving the style of expression. The distinguishing feature of this work is the emphasis placed upon practice in writing and speaking correctly.

The two-years course in French is adapted to enable pupils to read easy French at sight, and to give them considerable practice in elementary French composition.

(iii.) The general purpose of the "mechanic" or technical part of this course of study may be illustrated by these extracts :—

For each of the mechanical departments a carefully-graded series of models has been chosen, the construction of which illustrates every fundamental principle or process. The models in the primary series are made by all the members of a class.

The aim of the course in drawing is to teach the proper use of the pencil and drawing instruments, and to give facility in the expression of ideas of form by the various methods of freehand and mechanical representation.

About two-fifths of the time assigned to drawing each year is devoted to freehand work, and the remainder to mechanical drawing. In addition to the carefully-executed plates, much attention is given to the rapid production of drawings of models sufficiently accurate for many useful purposes, but by no means finished work. Such sketches frequently furnish the data for complete working drawings.

#### DRAWING.—FIRST YEAR.

Freehand lettering.

Freehand sketching : views of type solids and carpentry models.

Elementary working drawings of carpentry models to scale.

Elementary geometric problems.

Geometric designs.

Orthographic projection of simple solids : cutting planes, sections, and developments.

Design of supplementary shop exercises : book-rack, tool-box, small tables.

Freehand appearance drawing of types, singly and in groups.

Freehand historic ornament.

#### FORGING.

1. Description and operation of forge, and care of fire.

2. Names, characteristics, and uses of tools.

3. Typical processes : drawing, shouldering, forming, bending, upsetting, twisting, scarfing, welding, punching, hardening, and tempering.

4. Sources and properties of materials : common iron, Norway iron, Bessemer steel, open hearth steel, and crucible steel.

5. Applications : buttring, hook and staple, bolt, nut, timber hanger, bracket, eye bolt and ring, chain and hook, tongs, centre punch, cold chisel, cape chisel, spring, lathe tools, square reamer.

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#### § 10. BROWNE AND NICHOLS' SCHOOL FOR BOYS, CAMBRIDGE, MASS. (Including a preparatory department.)

(i.) The aim of the School is to give not only a thorough preparation for the University and the Technical School, but also a liberal training in branches not now required for entrance to college. From the tabulated course of study it will be seen that the pupils have, in each subject, one and the same instructor from the time they begin the subject until they finish it ; the teachers are thereby enabled to follow the development of every boy in the school, and to adapt the subjects and methods of instruction to individual needs and capacities. No promotions are allowed until the teachers are satisfied that the standard of the school is attained, and no pupil is allowed to retard the progress of his class.

One of the teachers will be at the school each afternoon, after 3.30, to give aid to those who seek it, and to do private work with those who wish to make rapid progress. In order that the more ambitious students may have the time and encouragement that legitimately belong to them, an advanced section in each class is formed when advisable, into which any student from the lower section is admitted when qualified. Students in the advanced section may enter college at the end of their fourth year ; or, by anticipating freshman year work in the elective courses of Class V., may be enabled to complete their college course in three years. Special students and new pupils who do the last two years' work in one year, are received only at special rates.

(i) Preparatory department.

By eliminating much of the usual grammar school work, especially in arithmetic, geography, and English grammar, and by introducing the study of French and Latin at an early age, the teachers hope to economise time and energy, and aided by the harmonious organization of their working forces, to contribute something towards the solution of the great educational problem of the present time, to reduce the waste and thereby increase the efficiency and rate of progress of early education, by a complete co-ordination of the so-called secondary school work from the Primary Department to the University.

Special effort is made to inculcate habits of accurate observation and expression, through practical laboratory work, and through frequent excursions to the country and the sea shore, and to the unique collections of the numerous museums close by.

Only boys of good character and habits and gentlemanly behaviour will be retained in the school.

(iii.) Preparatory Department.    Course of Study.

LANGUAGE

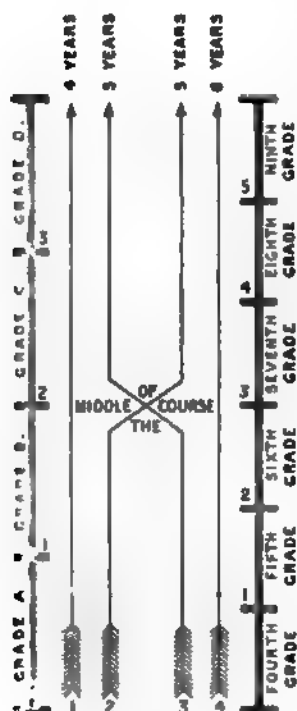
Age of Pupils.	Latin.	French.	English.
9-10	[Freehand drawing is substituted for Latin.] 2	Conversation, &c. 4 half-hours.	Reading. Penmanship. Declamation. Spelling. Definition. Dictation. 4 half-hours.
10-11	Inflection. Simple sentence. Vocabulary drill. 4 half-hours.	Conversation, &c. 4 half.hours.	Same continued. Grammar. Simple sentence. 3
11-12	Complex sentence. 4	Conversation. Translation. Composition. 2	Same continued, with Punctuation and the complex sentence. 3

NOTE.—The numbers indicate the number of lessons per week.

Age of Pupils.	History and Geography.	Mathematics.	Natural Science.
9-10	5	4	2
10-11	4	3	2
11-12	3	3	2

§ 11. SPECIAL DEVICE, OFFERING ALTERNATIVE DIVISIONS OF THE COURSE OF STUDY, ADOPTED IN THE GRAMMAR SCHOOLS CONTROLLED BY THE SCHOOL COMMITTEE OF CAMBRIDGE, MASS.

The course of study is divided in two alternative ways: (1) into six sections; (2) into four sections. Each section covers a year's work. Pupils taking the course in six years are classified in six grades, called the fourth, fifth, sixth, seventh, eighth, and ninth grades. Those taking it in four years are classified in four grades, called grades A, B, C, and D. When pupils are promoted to the grammar schools they begin the first year's work together. After two or three months they are separated into two divisions.



One division advances more rapidly than the other, and during the year completes one-fourth of the whole course of study. The other division completes one-sixth of the course.

During the second year the pupils in grade B are in the same room with the sixth grade. At the beginning of the year they are five months (one-half the school year) behind those in the sixth grade. After two or three months grade B is able to recite with the sixth grade, and at the end of the year both divisions have completed one-half the course of study—the one in two years and the other in three years. The plan for the last half of the course is the same as for the first half, the grades being known as the seventh, eighth, and ninth, in the one case, and as C and D in the other.

Arrow No. 1 indicates the four years' course, grades A, B, C, D. Arrow No. 2 indicates one of the five years' courses, grades A, B, 7, 8, 9.

Arrow No. 3 indicates the other five years' course, grades 4, 5, 6, C, D. Arrow No. 4 indicates the six years' course, grades 4, 5, 6, 7, 8, 9.

There are also two ways of completing the course in five years: (1) any pupil who has completed one-half the course in two years may at the end of that time be transferred to the seventh grade and finish the course in three years; (2) any pupil who has completed one-half of the course in three years may at the end of that time be transferred to grade C, and finish the course in two years. In both cases these changes can be made without omitting or repeating any part of the course.



## A COMPARISON BETWEEN THE ENGLISH AND AMERICAN SECONDARY SCHOOLS.

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### I

Among the great pleasures to an American of travel beyond the "unplumbed, salt, estranging sea," is the opportunity which he has of comparing the methods followed in any profession or trade in foreign countries with those in vogue in his own land.

Especially interesting is it to a professional man, when journeying in lands where he is an alien, to notice points of similarity and contrast in the practice there of the particular calling with which he is thoroughly familiar, and to which he has devoted his life. As the writer has for twenty-five years been a secondary school teacher in the United States, he has found in repeated visits to the mother country much pleasure and interest in visiting the great public schools of England, where the youth of her middle and upper classes are trained for the universities and for life.

Any attempt to describe for English readers the points of similarity or contrast between the two systems of secondary education cannot, in the nature of the case, be very thorough, as the secondary schools in both the English-speaking nations lack the uniformity which characterises the Lycée and communal school of France or the Gymnasium and Realschule of Germany.

The term "secondary school" in England is used by the writer as descriptive of the schools mentioned in the "Public School Year Book," known commonly to Englishmen as "public schools"—an expression which to an American seems a curious misnomer. The term "secondary school," as it will be used in speaking of the United States, includes three classes of schools—viz., public High Schools, endowed schools and academies and private venture schools of secondary grade.

The first class of secondary schools—viz., public High Schools—comprises a much larger number than the last two classes. To this class only can the word "public" school as it is used by citizens of the United States be properly applied. The expenses of them are defrayed entirely out of the public treasury, and the schools are absolutely free of expense to the children of the city or town in which they are located. Fees are required only of pupils who do not live within the jurisdiction of the town.

In a number of States not only is the education free, but the city also furnishes all the text-books needed. This class of



schools forms the highest section of the free public school system. In the most complete form of development, as it exists in cities, it comprises a four years' course of study, and the average age of the pupils who enter upon this course is between fourteen and fifteen. These High Schools in cities occupy separate buildings many of which are costly and elegant in character. In the smaller towns, however, there are found High Schools of more limited scope, providing a two or three years' course, and occupying the same building with the schools of lower grade.

The course of study in the public schools below the High School (the so called grammar grades) includes usually only those studies of elementary character which are popularly known as "the three R's," viz., arithmetic, reading, spelling, writing, English composition, literature, geography, the history of the nation, and civil government. Except in rare instances, no pupil begins the study of any other language than his native tongue until he has entered the High School.

The line of cleavage between the High School and the grades below it is very distinctly marked, and the passage from the Grammar School to the High is accompanied by a decided change in the studies which the pupil pursues, so that the first year of high school life, with its more difficult studies and the first attempt to learn a foreign language, is marked by the failure of a considerable percentage of pupils, who either leave school entirely or are required to take the year's work over again.

The fact that the Grammar School is for many pupils the last school attended before entering upon their life occupation is recognised by many school boards in conferring a diploma or leaving certificate, which certifies that the pupil has satisfactorily completed the course of study below the High School. Another potent reason why only a small percentage of the pupils in the lower schools enter the High School is that the legal limit of age required for compulsory attendance at school and that of entrance upon the High School course are the same—viz., between fourteen and fifteen. A very large percentage of the children of wage earners or working men are disposed or compelled by necessity to leave school at this time in order to help in the support of the family. Consequently the percentage of attendance as compared with the school population diminishes very rapidly in the last year of the Grammar School course and in the first year of the High School course. If the falling off in attendance during this period were graphically expressed, the curve marking the attendance would descend very rapidly between the ages of fourteen and sixteen. What percentage of the pupils of the Grammar School ever get the benefit of the High School is a difficult statistical problem which has never received a satisfactory solution.

The ordinary course of study in an American city public school system covers twelve grades, which in time consumed correspond very well with the twelve years from the age of six to the age of eighteen. The four highest grades of this course constitute the public secondary school, which is named the High School. The average number of pupils in the grades

of the High School is very much less than in the lower grades, where the pupils are mostly of an age when school attendance is compulsory by law. A common statement of this fact is made in the oft-quoted assertion that 80 per cent. of the pupils in the lower schools never enter the High School. According to the official report of the Superintendent of Education in the State of Connecticut, in the years 1897-1898 the number of pupils registered in all the free public schools of the State was 123,064, while the number in the free secondary schools of the State was 7,039. In the city of New Haven, the largest city of Connecticut, while the total number registered in all the public schools of the city is 16,650, the number in the two High Schools is 1,050, about 6 per cent. of the whole number. The rapidly diminishing attendance throughout the High School course is indicated by the educational statistics of Massachusetts and Connecticut, where the attendance on the public secondary school is as high as in any part of the Union. These statistics show that the lowest or first-year class of the High School comprises from 40 to 50 per cent. of the entire registration of the four classes in the school. There is a constant falling out by the wayside among those who enter upon the secondary school course, but never complete the prescribed curriculum of four years. If we regard the boys and girls who enter upon the secondary school course of the High School as an army starting out on a long march to reach a destination, hardly one-third of them are in the ranks when they reach the coveted goal of "graduation" at the end of four years.

A single practical illustration will be quoted in support of this statement. In the city of Hartford, the capital of Connecticut, the High School exists under the most favourable conditions possible, such as are hardly to be equalled in any other cities of the United States. It has one of the most beautiful, costly, and well-equipped buildings to be found in this country. There is practically no private school of secondary grade to divide the patronage with it. It enjoys the highest possible prestige and loyal support among the residents of the city. Nearly all pupils who receive secondary education in Hartford are numbered on its rolls. Yet from the carefully prepared statistics which were published in the triennial catalogue of the school in 1897, it is stated that the percentage of pupils who completed the course, compared with the number who entered during the decade from 1864 to 1874, was 20.9; from 1874 to 1884 was 31.6; from 1884 to 1896 was 38.1.

This tremendous shrinkage between the number who enter and the number who at last win the leaving certificate or diploma is due in a very large measure to the pressure of the burden of bread-winning upon the parents of the pupils and the need of their wage-earning services to help in the support of the family. If statistics were obtained from other cities, where the High School is under less favourable conditions, it is the opinion of the writer that the percentage of those who successfully complete the four years' course would be still smaller.

This problem of the duration of school attendance is at once a most difficult and a most fascinating one. The most thorough attempt at its solution known to me is the paper by Mrs. Daniel Folkmar, entitled "The Short Duration of School Attendance, its Causes and Remedies."\* The conclusions stated in that paper are the result of a careful statistical study of this subject in connection with the cities of Chicago and Milwaukee by Mr. and Mrs. Folkmar. It was their opinion that the results thus obtained were typical of all the great cities of the United States. Their conclusion, obtained by inductive and deductive methods, was that ninety-seven per cent. dropped out before reaching the High School. Putting the facts in fractional terms, they say that in the schools of Chicago nine-tenths leave before reaching the seventh grade, only three in a hundred get into the High School, and only three in a thousand complete the course at the High School. The last report of Superintendent Andrews, formerly President of Brown University, gives, for the city of Chicago in 1899, 231,949 as the number of pupils registered in public schools of all kinds, and 10,123 as the number in High Schools. Less than five per cent. of the whole number enter the High Schools.

For the nation at large the latest trustworthy figures obtainable are those in the last report of the Hon. William T. Harris, U.S. Commissioner of Education for the year 1898-99. In all the State-supported schools throughout the nation there were enrolled 15,234,435 students. Of these there were 476,227 secondary students in the public High Schools, while the number in private high schools and academies was reported at 103,838. The Commissioner of Education estimates that the aggregate number of secondary students would reach a figure not less than 675,000.

According to the official figures, then, the situation with regard to the education of youth in the United States may be summarised as follows:—

There are between 16,000,000 and 17,000,000 pupils† below the age of nineteen under instruction in all the schools, public and private, in the United States. Of these between 3 and 4 per cent. are in secondary schools, where the age of pupils ranges from fourteen or fifteen to eighteen or nineteen. Of the secondary school pupils between one-fifth and one-sixth are educated in private schools and the rest in public schools, supported out of public funds, and charging a fee only to pupils who come from outside the boundary of the town. A public school in the United States, it must be repeated, is one which is free of payment to all pupils resident in the town. A private school is one which charges a fee. The parochial schools of the Roman Catholic Church which exist in most large cities are classed as private schools, as they charge a fee to all parents. Their pupils, of course, are all children of communicants of the Church.

\* *American Journal of Social Science*. Proceedings of the American Social Science Association, held at Saratoga in August and September, 1898. Vol. XXVI., pp. 68-81.

† Total enrolment in schools and colleges, public and private, 16,738,362. — *Report of the U.S. Commissioner of Education for 1898-99*.

The fact that the High School is absolutely free to the children of the community which supports it, makes the system unique among the secondary State-supported systems of the world. With the exception of a few cantons in Switzerland the writer is not aware of any prominent nation which maintains a secondary system in which a fee is not required of most of the pupils, except the great English-speaking republic of the Western Continent. The United States, England, France, and a great part of Germany are alike in making State education free up to the age of thirteen. In the United States secondary education, supported by the State, is also free. In England it can hardly be said that a complete system of secondary schools, supported out of the public treasury, exists. In the two countries of Continental Europe, France and Germany, their elaborate and carefully organised systems of secondary education rest in a measure upon the fee system, which requires that the parents of the pupil shall pay a considerable portion of the expense necessary for maintaining the schools. It will be seen, therefore, that of these four nations the United States alone bestows secondary education as a free gift upon the children of those parents who can support their children at school during the age from fifteen to nineteen, provided they be residents of the community which maintains the school. Fees are required of all pupils in attendance who live outside the limits of the municipality or town.

This maintenance of a free High School rests in most States simply upon custom and the force of public opinion, though in some States the support of a High School is imposed by law upon communities of a certain size. In almost all States the maintenance of a High School is a matter of local option, to be decided by the vote of the voters of the community. In Massachusetts, however, the principle of local self-government in this matter is not recognised, but the commonwealth compels the city or town to maintain a free High School of a certain grade. Since 1891 every town must provide free High School tuition; if not in a High School of its own then in that of another town. The law of 1898 prescribes that the High School must have at least one course four years long and must be open forty weeks every year. It must prepare pupils for State Normal Schools and higher scientific institutions and Colleges, as well as provide general culture and training. So far towards the centralised system of the French Republic has the administration of secondary education gone in Massachusetts.

In striking contrast with this Massachusetts system is the organisation of secondary education in the Province of Ontario in the Dominion of Canada. The question of free High Schools is determined by each locality for itself, and this method of local option is considered more satisfactory than to make all High Schools free by the act of the Provincial Parliament, or to fix a uniform fee for the Province. Pupils not resident in the county pay such fees as the Board deems expedient, but these must not be greater than the cost of maintenance, nor less than the fees of county pupils. In this way the cost of the High School to the

municipality is lessened. As a result of this law the official reports of the Secondary Schools show that in 1893 of the 128 High Schools and collegiate institutes, 48 were free and the rest charged fees varying from 2.50 dols. to 26 dols. per annum. It will be seen from this comparative statement that the custom of absolutely free High Schools is confined to the United States among the nations of Europe and America, except for a few cantons of Switzerland.

To the writer it seems a very unjust system to compel all the wage-earning taxpayers of a community to support an institution the advantages of which only a small percentage of them can utilize. The struggle for bread makes it difficult for men to support their children beyond the age of fourteen, the age of compulsory education. The average age for entrance into the High School is slightly above fourteen. It seems to the writer absurd to place the municipal supply of water—a necessity—on a fee-charging and self-supporting basis, while providing the opportunity of secondary education—a luxury—for nothing.

If England ever has a State-controlled system of secondary education, it is the writer's hope that the European custom of making it a fee-paying function of government will be followed, rather than the custom prevailing in the United States. It seems clear that the discharge of the function of secondary education by a municipality should be met by public price or fee rather than by tax, since it is a special measurable benefit to individuals, not a function in which the public purpose is the exclusive consideration.\*

Moreover, the cost per pupil in the High School is much greater than it is in the lower schools, where the children of the wage-earners are educated during the years when school-attendance is compulsory. The High School buildings are much more elaborate and costly than the Grammar School buildings, and a larger number of teachers is required in proportion to the pupils. And yet a far smaller number of the population derives benefit from the costlier school than from the cheaper school. Thus the official estimate of the Superintendent of Schools of Springfield, Mass., as to the annual cost per pupil of High School education is nearly £15, or \$75.00, while that of the pupils in the lower grades is a little above £5, or \$25.00 per pupil. This estimate is based merely on current expenses. If there should be added to this comparative estimate sinking fund charges, interest on investment, insurance, repairs, etc., the contrast would be still greater.

The High School system, as I have described it, exists in most of the cities and large towns of the Northern states from the Atlantic to the Pacific, but it is not found very generally in the Southern States below "Mason and Dixon's line," as in that region of the United States it has been found difficult to maintain by public taxation even the Elementary Schools for as long a period as is customary in the more Northern states.

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\* See "Essays in Taxation," E. R. A. Seligman, pp. 302-304.



## II.

I have given an account of the public High School system in considerable detail, in order that English readers may better understand the contrasts which I shall proceed to point out, and also that they may make their own comparison with European systems of Secondary Education.

In these public schools are enrolled, as has been said, about four-fifths of all pupils who are receiving Secondary Education. The so-called private schools in which the remaining one-fifth are enrolled may be roughly divided into endowed schools and private venture schools. The property of the first class of institutions, like the English public schools, is in the hands of boards of trustees, who can derive no pecuniary profit from the schools. Some of these are old institutions, founded by individuals, like the Phillips Academies of Exeter, New Hampshire, and Andover, Mass.; the Roxbury Latin School of Roxbury, Mass.; the Hopkins Grammar School of New Haven, Conn.; or recent foundations like the Lawrenceville School, of Lawrenceville, New Jersey, which is one of the wealthiest in the United States.

Among the private secondary schools are many which may be called denominational schools, that is, secondary educational institutions established and fostered by the different religious bodies. A number of different conferences of the Methodist or Wesleyan Church support each their own conference Seminary. The Baptists, in like manner, have their schools. The Friends have a few in communities where their numbers are sufficiently numerous. The Roman Catholic secondary schools are chiefly incorporated with the Jesuit Colleges. One of the most interesting developments of the last thirty years has been the growth of several schools modelled more or less on the lines of the great English Public Schools, where the religious services of the Protestant Episcopal Church conserve the religious life of the school. The oldest of these is St. Paul's School, at Concord, N.H., but equally famous is Groton School, Groton, Mass., whose head master, Rev. Endicott Peabody, an old Cheltonian, was a boy at an English Public School, and has succeeded admirably in transplanting to American soil some of the best features and something of the spirit of the English Public School. These two are in New England, but the Shattuck schools, at Faribault, Minn., one for boys and the other for girls, are schools of a similar type.

The greater number of these private secondary schools are, however, private business enterprises, owned by one or more individuals. Some of these are found in large cities like Boston and New York. Such schools, of course, are day schools, but there is a considerable number of proprietary boarding schools, some of which, like the Hill School at Pottstown, Pa., an admirable institution, have most extensive equipments, and a strong teaching staff.

Among these schools there is one kind of school which, so far as I know, is unique, and not found in other countries, viz., the so-called Military Academy, examples of which are the Riverview

Military Academy at Poughkeepsie and the New York Military Academy at Cornwall, on the Hudson, both in the neighbourhood of West Point, where, in the combined Woolwich and Sandhurst of the United States, officers are trained for the United States Army. These schools are conducted more or less strictly according to military discipline. Every boy must wear the uniform all the time and must drill every day. The pupils usually march in squads in military order to lessons and to meals, after the manner of West Point, and have guard mounting in the morning and dress parade at night. These military schools are in considerable favour with some parents, as tending to regular and systematic physical development, and as furnishing a tonic discipline to self-willed and unmanageable boys.

The existence of this class of military schools in the peaceful nation, where up to a recent date the regular army for seventy millions of people numbered only 25,000 men, is very curious. To be an officer in the army is not in any sense a possible career for many American schoolboys, as it is in England, where the "Army Class," preparing for Woolwich and Sandhurst, is found in many public secondary schools. In contrast with the great free competition taking place in England twice a year, for the cadetships at the military colleges, open to any boy of the nation, the cadetships of the United Military Academy at West Point are vacant, as a rule, once in four years. They lie in the gift of the Congressmen from the 357 districts which are represented in the Lower House of Congress, each district being entitled to have one cadet in the Academy.

Each Congressman may appoint any youth to the cadetship, but the juster custom is gaining ground, by which the Congressman gives the cadetship to the winner in the competitive examination open to all the boys in the district. Possibly one of the fruits of the new imperial policy of the American Government may be a large increase in the standing army and in that case more secondary school boys in the United States will look forward to the army as a career.

### III.

If the preceding description of the secondary school system of the United States has been clear and distinct, it must have suggested to the English reader some points of contrast with the Public Schools with which he is familiar in his own country.

The remainder of this paper will be devoted to calling attention to points of contrast and resemblance which seem to the writer notable and characteristic.

The American secondary school is to a very large degree a day school in contrast with the English Public School which is commonly a boarding school.

The public High School of the United States differs also from that of the secondary school of European nations in being co-educational. Boys and girls are educated side by side in its courses, except in some of the largest cities, where there are separate High Schools for the two sexes.



On the contrary, of the private secondary schools in the United States few are co-educational, and the number is not increasing. The flowing tide of public opinion seems to be running in another direction.

Some of the boarding schools maintained by the religious denominations, such as the Methodists, Baptists, and Friends, are co-educational; but a very large majority of the boarding schools are limited to one sex or the other. As an ardent admirer of the great English Public Schools I am glad to see that the joy, benefit, and *esprit de corps* of a corporate life is to be extended to the other sex. Anyone who has seen the pioneer school of that type in Scotland, within the grounds of the ruined cathedral, not far from the famous links of St. Andrews, or has felt the charm of an English summer day within the park of Wycombe Abbey School, so vigorous though so young, must earnestly desire to see rising in other parts of England institutions like them, in equally beautiful surroundings.

Notwithstanding the severe competition of the free public High School in the United States there seems to be a steady increase of large boarding schools situated in the country. This is largely due to the fact that the parents of the wealthier classes living in the larger cities prefer to send their children into the country that they may avoid the physical and moral dangers attendant upon life in large cities.

As the course of study followed in American secondary schools is fully treated in another paper in this volume I shall treat only of broad lines of contrast between the two systems. In the English Public Schools a very large majority of the pupils are preparing for the Universities or the Army Colleges, and the predominating aim of the English secondary school is to fit them for these institutions. This is not true of the American secondary school, whether it be public or private. According to the last statistics of the Commissioner of Education for the year 1898-1899 the number of pupils who completed the full secondary school course in that year was 68,330, of whom 21,602, rather less than one-third, were prepared for College. In the private secondary schools rather less than one-half of the graduates were prepared for College, while in the public High Schools rather more than one-fourth of those who complete the full course are to be placed in the same category.

According to the same authority not more than 11.51 per cent. of all the scholars enrolled in the public High Schools were preparing for college; all the rest would leave school either before completing the school course, or immediately after the secondary school course was finished, to begin active life or to enter Training Colleges in order to prepare for the teaching profession.

This latter function of the High School, in giving to the future public school teachers the academic and culture training which necessarily should precede their technical and professional training, is its chief function everywhere throughout the United States; and it is because of its discharge of this function that the existence of a free High School, supported by public taxation, can most reasonably be justified. The course which provides for

these pupils is commonly called the English course, or the general course, and often includes, besides the usual secondary English studies (with French and German), the study of Latin. Under ordinary circumstances at least 50 per cent., and possibly more, of the enrolled pupils will, except in University towns, be found in this course. The majority of pupils who begin this course, and almost all who complete the secondary school course, are girls. In the city public schools of the United States, of a grade below the High School, comparatively few men are found merely as teachers. At the head of each Grammar School is a supervising Principal, usually a man who directs the administration of the school, but he seldom does much teaching. The subordinate posts on the teaching staff are almost always filled by women. Naturally, therefore, few men are found in the Normal Schools, and few among those who complete the course of the High School, which lays the foundation for the more professional training of the Normal School. To find in England so many men teachers in what are known as Elementary Schools is a curious novelty to an American visitor. In the corresponding grade of school in the United States one very rarely finds a man teaching. According to Commissioner Harris's last report, in the North Atlantic States in all public schools only 18·8 per cent. of teachers are men. It is hard for me to find in English schools a parallel for this function, which is discharged by the general course of the American High School, unless it be in some classes of the English Higher Grade Board Schools. The culture and professional training of teachers are, I judge, combined in the English Training Colleges, much as they still are in some parts of the United States.

The main function, then, of the High School in the United States is preparation of pupils for the Normal School or for active life, while its work in preparing for College or scientific school is entirely subordinate. To a large majority of its pupils it is the top of the educational ladder. On the other hand, the dominating and all-controlling purpose of the English secondary schools is preparation for higher institutions. To most of the pupils it is a round in the ladder, although the strict enforcement of the superannuation rule sifts and shuts out the incapable and lazy, so that their education may end there.

Many of the best private secondary schools of the United States, especially the endowed ones, have as their main purpose the function, characteristic of the English Public Schools, viz., preparation for higher educational institutions, such as Colleges, scientific and technical schools. For this reason the most famous of them are called preparatory schools, a name which is given in England to schools where young boys are prepared for the great Public Schools. Ninety-five per cent. of those who complete the course in my own school enter colleges or scientific schools, and the same is doubtless true of many others. In the West of the United States colleges often have a preparatory department, which is simply a secondary school under the control and administration of the college.

Among the subjects for study, more formal attention seems to be paid to English literature in America than in England. There is a much richer variety of text-books and a larger time allowance. Seldom have I found more than an hour a week allotted in the English Public Schools and little study of the historical development of the literature. But five hours a week is not uncommon in the United States. English composition and the practical study of rhetoric, which are very common in this country, are not so generally pursued in the English Public Schools. While a great variety of school rhetorics are issued by the American publishers, the number which I have noticed in England is relatively small. But English pupils gain that facility and practice in writing good English in the constant use of idiomatic and vigorous English translations from Latin and Greek. In such form rooms as I have visited I have been struck with the fact that translations which seemed to me correct but humdrum were severely scored by the master, and the pupil was required to turn the thought into a more satisfactory literary form. Careful and elegant translations there are more sought for than in American schools, while strictly essay or theme work has much less time given to it. This careful practice in translation seems to me to find a good illustration in the translation prize competitions which take place each month in the London "Journal of Education." The contest in that arena is always very spirited and of high excellence. So many are the competitors each time that it must have a distinctly appreciable effect in many parts of England in setting a high standard for translation among teachers. The comments are most helpful and inspiring, and bear out the true theory of translation as an artistic rendering of the thoughts, and not a mere literal transfer of words and sentences from one language to another.

Latin and Greek prose composition are carried on to a much greater extent and to a higher degree in English Public Schools than in any American school, because both languages are begun at an earlier age than in the United States. Last summer, in the Twenty at Rugby, the piece set for regular form work in Latin composition was a passage from George Eliot's "Romola," which would have been thought difficult for a prize examination in an American College.

As for Latin elegiacs and Greek iambics, I have never found the slightest attempt at such verse-making in American schools. It is possible that it may be tried occasionally in a few of the Jesuit colleges; ordinarily it would not be easy to find either teacher or pupil with any facility at all in this form of mental gymnastics, which forms a *sine qua non* to winners of classical scholarships in England. The word Gradus is a complete mystery to most American readers of "Schooldays at Rugby," and if a schoolboy here should attempt that road to the Sacred Mount of the Muses, he would find it a slow and toilsome journey. The tenacity and vigour with which verse-making holds its ground in English secondary schools amazes an American visitor. The educational value of such work is hard for him to appreciate.

To him the Headmaster of Haileybury is amusing, but not convincing, when he says that "verse-making satisfies the conditions of a stimulus in education better than any other linguistic or literary exercise in vogue at school at the present time. To compare small things with great, the perfecting of a pentameter is in this one respect of giving well-merited satisfaction not wholly unlike the hitting of a volley to leg." The American visitor finds himself more heartily in sympathy with Mr. Oscar Browning's dictum that "to spend such time on such a process as this is to play and juggle with the human mind, to make pretence at thought when there is no thought at all, to mark time instead of marching, to work a mill that grinds no corn."

The particular authors in Greek and Latin which are read in English schools are more varied and more difficult than in America. The list of authors read at Rugby during the course of four years in the sixth form, which I have in my possession, more closely resembles the curriculum of a small College in this country than that of a secondary school. The books also differ more from year to year. In Latin an American boy reads in a secondary school a few books of Cæsar's Gallic War, seven orations of Cicero, six or eight books of Virgil's *Æneid*, and possibly some Ovid. In Greek the course includes Xenophon's *Anabasis*, or the *Hellenica*, and Homer.

The nearest attempt at a general course in the classics is that just issued for secondary schools by the Committee of Twelve of the American Philological Association. Of course this programme is merely advisory, and not compulsory. Their five years' course for boys from thirteen to eighteen includes five books of Cæsar, Sallust's *Catiline*, six to nine orations of Cicero, 500 to 1,500 verses of Ovid, six to nine books of Vergil's *Æneid*, and the *De Senectute* and *De Amicitia*, and selected letters of Cicero. The Greek course covers but three years, and includes four books of Xenophon's *Anabasis*, six books of Homer, and sixty pages of some other Attic prose author.

In the United States there is little variety in the authors read in the same school from year to year. An American teacher is surprised to find that a boy at Rugby, or Eton, or Harrow, might remain two or three years in the same form, and not be called upon to read the same portion of the same authors twice. Very rarely does an American boy have any taste of the *vers de société* of Horace, or of the dramatic literature of the Greeks, until he has left the secondary school for college.

This stereotyped character of the secondary school course in the classics is to a large extent due to the fact that it is intended to conform to the specific requirements of the Colleges for which the school is preparing its pupils. Consequently the courses in the different schools are very much the same for the same classes, and boys find little difficulty in changing at the end of each year from one school to another.

In England, however, this is not the case. If a boy at Winchester or Wykehamist in the Sixth Book, or Form, should next "cluster-time" pay a visit to six of the other largest Public Schools,

and inquire what portions of what authors were then being read by the sixth form in those schools, he would very seldom find an instance where the portion or author was the same as at his own school during the summer term.

In England boys seldom enter directly the three highest forms of the school; they generally enter in a lower form. Whereas in most American schools it is quite common for boys to enter either of the three highest classes. This is an incalculable advantage to the English master in giving him pupils who have had most of their training in previous years in school, and consequently do not have to be "licked into shape."

The specialisation in the training of boys for scholarship examinations, which is so unique a characteristic of English schools, and so powerful a stimulus to effort, has no parallel in America. There are practically no such scholarships to be won on entering American Colleges, and consequently all the boys in each class at school receive practically the same instruction, and there is little tendency to develop a pupil into a specialist in any subject until he has entered College. The high point of attainment to which English selected boys who are going in for the great competitions, like the Balliol Scholarship, are carried in mathematics or in classics fills an American teacher with surprise and admiration. Differential and integral calculus are seldom studied by students in American Colleges until after they have been matriculated two years, but I found boys in the highest form at St. Paul's, London, studying this difficult subject in preparation for the mathematical scholarships at Oxford and Cambridge.

This distinct recognition of and provision for both the ordinary and the able scholar in planning courses of study, which is especially characteristic of the Universities in the bestowal of their pass and honour degrees, finds little or no parallel in the United States, although I have heard some college professors urge that a similar plan ought to be introduced into this country. The American system certainly favours a more symmetrical development of the many, while the English lays more stress on the higher attainments of the few. Once I expressed my surprise to a Rugby friend at the great amount of work covered by a boy in the Sixth who was in training for an Oxford scholarship, and said that it did not seem to me that he had much new work to cover in the classics in order to take his bachelor's degree at the University. The reply was that the boy could probably take his pass degree at once, except for the legal requirement that he should keep his required number of "terms" within a mile and a-half of Oxford.

It was an interesting surprise to me to find that in English Public Schools there was no formal ceremony to mark the departure of the boys who have completed the course. Every June, in the United States, all the members of the senior class receive leaving certificates or graduation diplomas, as they are called, before a crowded assembly of their friends. English orations are spoken, and essays are read by some of the departing pupils



Often a distinguished visitor, possibly an alumnus of the school—"old boy" he would be called in England—makes an address, and the ceremonies are in many cases ended by a formal valedictory speech by some member of the graduating class. "Speech Day" in England is a gala day, corresponding in some respects to this, except that it does not in many cases come at the very end of the school year. Some of the sixth form return to school in the autumn, and no leaving certificate of any kind is given to those who are to know the old school no more as pupils. I believe that at Eton every boy who has been a certain number of terms at school can, on leaving, have his name cut on the wainscoting of the old upper school, where the name of Mr. Gladstone is carved in the oaken door, with those of his sons about him; and such, if I am not mistaken, is the only material testimonial which an "old boy" has of his school days in England.

The very general distribution of prize books as a reward of excellence, which is a feature of Speech Day in England, is rarely found in the United States, although the custom flourishes across the English Channel in France, where it reaches its culmination in the Concours Général in the beautiful hall of the Sorbonne. There the table by the public orator is piled high with elegantly bound books, which, with the accompaniment of imitation laurel wreaths, are bestowed upon the prize winners.

One feature of "Speech Day" strikes some visitors unpleasantly. It is the part of the head master's speech which gives a long list of the prizes and scholarships won at the Universities, and of the distinctions, civil and military, which former pupils of the school have won. The spirit of rivalry and competition, which is the very essence of the English Public School system is in the main commendable and stimulating; but is it not in this respect carried to a point beyond what the dignity of the occasion warrants?

Much more commendable, certainly, is the simplicity of language which is used in English schools in speaking of former pupils, and of the different classes of the school, peculiar as that nomenclature often is. In this country the two lower classes of a high school, composed of boys and girls of fifteen and sixteen, are sometimes called by the high-sounding names, Freshmen and Sophomores, which is a foolish imitation of college custom. In England no distinction seems to be made between those who went through the Sixth and those who left before they reached that form. They are all "old boys." Old Rugbeian, Etonian, Harrovian, Wykehamist, Cliftonian—they are simply "old boys" of a famous "Alma Mater," and are seldom known as alumni or graduates, which are the usual terms in the United States.

There are other interesting differences in the use of language between the schools of the mother country and ours. Somewhere in Mr. Storr's "Life and Remains of the Rev. R. H. Quick" occurs the phrase, "I put a boy on to construe." The average American reader would find it hard to understand this, for "construe" is a word not often heard now in schools in America. In my boyhood it was sometimes used in cases where a dull boy was told to give alternately the Latin words and their English meaning in a

sentence which he was trying to puzzle out. "Construe" in England seems to mean simply to translate. Instead of the sentence quoted above an American teacher would say, "I asked him to translate." When a teacher here takes his class over a subject a second time in order to freshen it and fix it in the minds of his pupils, he is "reviewing," but an English master will say that he is doing a "bit of revising." When a boy in examination in England is given to translate a passage which he has never seen before, it is usually called "Latin Unseen," but in America more properly it is termed "Latin at sight." The words "lesson" and "school" seem to be used in a wider variety of senses than in America. The class-room work in the United States is very commonly called "recitation." I remember very well once at Harrow when I said, "I should like to hear some recitations." The reply was, "We do not have them much except on Speech Day." "Preparation" used with regard to work in the form-room or class-room would seem a mystery to most Americans. Usually such time here is given mostly to testing the knowledge of the pupils gained outside the class-room. "Form" as a word used either as a bench on which the pupils sit or for the class itself is very little used in the United States. "Challenge" examination, by which, as I understand, is meant the opportunity of rising from one mathematical set to another, whenever the pupil thinks he can do so, is something entirely unknown with us.

In the assignment of teachers to their work and the flexible arrangements for promotion of pupils from one form to another the secondary schools of England differ materially from those of the United States. The position of a form master in an English school who instructs the same form in several subjects—such as Greek, Latin, English, Scripture, History, and sometimes other subjects—has almost no parallel in America. The prevailing practice here is for a teacher to teach several classes in not more than one, two, or three subjects. In this way teachers specialise in their work. A teacher will teach chiefly Latin, Greek, mathematics, or history to several divisions of a large class, or to several classes of moderate size. This, I believe, is the case with teachers of mathematics, science, or modern languages in the English Public Schools. There is something to be said in favour of each system, but there is not space to argue the question at length.

I merely allude to one or two advantages in the English method. It certainly enables a form master to keep in touch with the progress or failure of the pupil in more subjects than is possible in the American system, where a boy may do well with one teacher and very poorly with another, without being prodded up to a corresponding level of attainment in all lines. Secondly, it permits a more flexible adjustment of time table to the needs of the form or class. If a form master finds that the work in Latin is going on more rapidly than is necessary, while the Greek lags a good deal for any reason, he may without any conflict temporarily lessen the amount of time spent upon the one, and add it to the other, since all the form work is in his hands. But in most American schools this would hardly be possible; troublesome conflict and friction between different teachers would be sure to arise.



It seems to me, also, that it must increase the prestige and standing of a teacher with his pupil when he shows himself strong and able to teach several subjects well, instead of being a satisfactory instructor only within the narrow range of one or two subjects. Under this last system the intellectual development of the pupil is not likely to be either so regular or so symmetrical as where one teacher is held responsible for the pupil's progress in several subjects.

In American secondary schools promotion of pupils into a higher class seldom comes except at the end of the school year in June, when those who pass their examination are admitted to the higher class or form; while the delinquents either leave the school or take the year's work over again.

In English schools apparently the larger number of promotions take place also at the end of the summer term in July, but a very considerable number occur also at the end of the autumn and Easter terms. The retirement of several boys in any form brings about the rise into that form of the best pupils in the form below. Accordingly, in each form a process of competitive selection is going on with regard to scholarly attainments and achievements, so that an able and faithful boy can rise very rapidly.

In American schools promotion is much more wholesale, inasmuch as it is not a competitive test but a pass test which the boy has to face in order to win his place in the next highest class or form. There may be a wide difference between the attainment of the best pupil and the poorest in a class, but both have the same opportunity of promotion if they satisfy the examiners by passing the examination. In the summer term of 1891, at Rugby School, when the present Bishop of Hereford was Head Master, in the upper bench of the sixth, one of the boys had been in the form only one term, one had been enrolled in it eight terms, while the average time was three and a half terms. Such a thing would be impossible in an American school; any boy who spent more than three terms in the highest class, except for reasons of sickness, would properly be considered a dull scholar, but such would not necessarily be the case in the Sixth Form of an English Public School, for he might have entered that form very young, and thus be continuing in school a longer time in order to win a scholarship at the University.

The English superannuation rule, by which a boy is required to reach a certain form at a certain age or leave school, and is not allowed to remain in the Sixth Form after his nineteenth year, is to my mind if wisely administered an admirable rule and a stimulus to remind the idle and indifferent boy that life may not properly be considered a picnic, that 'time is long and time is fleeting' and that he owes it to his parents to make good use of his talents.

It would be interesting to know who introduced this rule into the English Public School system. According to one book\* the present Archbishop of Canterbury, Dr. Tenny, introduced it at Rugby and certainly that was a great step forward. Whether

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\* *The Public Schools of England*, 1881, p. 166.

it was taken from other schools or originated in his fertile brain I do not know, but it is a system peculiar to England, and is worthy of high praise. Its adoption in other countries might have a salutary influence upon idle youth.

The crowning glory of the English Public School system in the minds of many is its system of self-government, founded on the prefectorial system, with the subordinate adjunct of fagging, leaving the discipline of pupils outside of the form room to the members of the Sixth, and constituting the house master a court of appeal. It is *sui generis*, and its success in practice vindicates its right to approval. Under this system pupils learn, like Clearchus, to rule and to be ruled. It is no mere idle fancy that suggests that by this system has been developed in English youth something of that power which has made England great as a governing nation both of her own citizens and of subject nations.

In the hands of an alert, keen-witted, and conscientious master it is the best school government in the world, much better than a system of close espionage. On the other hand, where authority resides in the power of an incapable or indifferent house master, there is tremendous power for evil in the system, with its wide opportunity for the early learning of brutality, wickedness, and sin.

The organisation of an English Public School for discipline and administration, whether it be on the ordinary house system or the hostel system prevailing at Marlborough, Haileybury, and Wellington, is very interesting to a visitor. I have long sought to find a proper analogy for the domestic organisation of an English Public School, in order to describe it to my countrymen. The nearest and most satisfactory analogy is the government of the United States, National and State, which is so admirably described by Mr. James Bryce in *The American Commonwealth*.

The whole school corresponds very well to the whole nation, the great republic made up of self-governing States, of which the head master is the President. Each master's house is a State, regulating its own internal affairs with rules, which may vary considerably, and directed in its administration by the government of the house master. The members of these masters' houses (or States) all share alike in their influence on matters which concern the whole school.

In most American schools of any size the class or form is the chief social unit, and the centre of athletic competition. On the other hand, in most English Public Schools the various masters' (boarding) houses are the centres of social life and of athletic competition, so that the career of a boy in the school is always associated with his house. Much of the benefit or injury of his school life will be determined by the character of his house-master. It is this close, intimate contact between a noble and able man and a boy in the plastic days of youth, which is the charm and glory of the system, and constitutes the superiority of the English Public School over the Secondary Schools of Continental Europe.

I have omitted many things by way of criticisms, which I might have made with friendly purpose. Should any English reader desire to know what these are, he is referred to the articles "On Certain Defects in English Public Schools"\* and "History in English Public Schools."†

Though in the interior equipment of school buildings, seats, desks, blackboards, laboratories, furnishings, and school appliances the American schools are much superior to the English, in historic interest, in picturesque quality, in beautiful environment, in wealth of association, in variety and richness of provision for athletic sport, the English schools far outrank any other in the world.

Whether it be the meads of ancient Winchester, where I heard the strains of *Dulce Domum* in the late English twilight, or Eton by the "Silver Thames," or Harrow-on-the-Hill, with its beautiful terrace and the stirring songs of boys' voices in the Speech-room, or Marlborough clustered around the "Castle Inn," and near the noble forest of Savernake, or Rugby with its Close and the chapel sacred to father and son, or, fairest of them all in its situation, Glen Almond, overlooking the valley of the Tochty, and the village which is the scene of "Beside the Bonnie Briar Bush," it is an abiding pleasure by the blessed power of memory to call them before my mind's eye. How many times the utterance of my heart was, "Stay, passing moment, thou art fair."

To the many masters who showed so much kindness and courtesy to a seeker after knowledge I return most grateful thanks, and I count England happy that the moulding of the sons of the higher classes lies in such hands.

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\* *Journal of Education*. London. Dec. 1893, p. 667

† *The Study of History in Schools*. Report to the American Historical Association by the Committee of Seven. Macmillan and Co. 1899 p. 210.

## CAN AMERICAN CO-EDUCATION BE GRAFTED UPON THE ENGLISH PUBLIC SCHOOL SYSTEM?

That the co-education of boys and girls has succeeded in America \* must in fairness be admitted by all who are willing to concede any degree of merit to American educational institutions. It has undoubtedly more than held its own amongst a people who do not take anything educational for granted. It has spread from the country districts, where it was economically necessary, to large cities with ample room for separate schools for both sexes. "It is," says the Commissioner of Education, "the policy generally pursued heartily endorsed by supervising officers, and strongly supported by the people in all sections of the country." Of the 'public' schools, which educate three fourths of the children of America, rich as well as poor, ninety-five per cent. are co-educational. Of private schools, nearly two-thirds of the number, educating more than two-thirds of all the children attending private schools, have adopted the same policy, and the Commissioner finds evidence year by year that the number of children educated separately tends to decline. In a country where hygienic considerations have far more weight in education than in our own, and where every educationalist studies the question from its physiological and psychological standpoint it has stood the fiercest medical and scientific scrutiny, and come triumphantly through the ordeal, it has stood the scholarship test and the moral test, and no serious evils have ever been successfully charged against it.

It is not, therefore, the object of this paper to raise the whole question of Co-education *versus* Separation.

But whenever the attempt to co-educate the sexes in England is made or suggested, with an appeal to the success of the American system, there is invariably and inevitably the objection, "But the circumstances are so different." And the circumstances are indeed so different that the advocate for co-education cannot in a single conversation overcome the objection, so that it seems worth while to attempt a full and fair estimate of what the differences are and how far they tend to make co-education impossible or undesirable in England, taking for granted the

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\* "American" is used in this paper with special reference to the United States, but may be taken with certain reservations to include Canada.

well-known traditional features of English public school \* life, and the necessity for their preservation.

To begin by tabulating the differences. —

1. Boarding Schools { Engrained in the English traditions.  
Practically non-existent in co-educational America.
2. Social distinctions { Powerful in England.  
Absent in America.
3. Range of ages { England, 10-19 (see below).  
America, 14-18.
4. Corporal punishment { The "divine right" of English boys.  
Not countenanced in America.
5. Discipline { Autocratic in England.  
Weaker in America (based on a compromise).
6. Idleness { The natural state of an English boy.  
Tempered by the commercial instinct in America.
7. The Prefectorial system (undeveloped in America).
8. The absence of advanced knowledge in any one subject on leaving school in America.
9. The Examination system { Rampant in England.  
Non-existent in America.
10. The smaller importance attached by masters and boys in America to athletic distinction.
11. The greater freedom of intercourse between the sexes allowed by American custom.

All these differences do certainly exist in the systems of the two nations, and all have been advanced as tending to make co-education less possible in England.

In spite of a certain overlapping which is inevitable it will be best to take each point of difference separately, define its limits, and discuss its bearing on co-education.

1. *Boarding Schools.* — The question of boarding schools *versus* day schools is a perennial one, but as far as England is concerned the answer is already given. Theory may be probably in favour of day schools, but the English parent persists and will persist in sending his children to a boarding school. A dozen considerations—some educational, some social, some hygienic, some perhaps selfish—influence him in so doing, and rapidly as the day schools are learning to catch the public school spirit, the more important part of secondary education

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\* In "public schools" throughout this paper are included all schools educating boys up to the age of nineteen, and preparing them intellectually, athletically, and socially for the universities. The confusion between American and English technical terms will be avoided by using only the latter, to the possible mystification of American readers.



will be in the hands of the boarding schools at least for another century. If, then, co-education is to make good its claim to be the preferable system for secondary schools, it is imperative that it should not find refuge in day schools alone, thus tending to widen and perpetuate the breach between the two, but prove its adaptability to the English boarding school and all that it signifies. It may be noted, then, in the first place, that, as the result of much inquiry in America, the writer was unable to find in a single instance the belief that it was co-education which operated against the boarding school system there. If the nation wanted boarding schools they would be co-educational, as is the case already with certain denominational schools (*e.g.*, Wesleyan and Friends'). That the boarding schools known by reputation to Englishmen (such as St. Paul's, Groton, St. Mark's, &c.) should be for boys only, is due to the accident that they are a conscious imitation of English institutions. The American has attempted to reproduce the singularly undefinable—howbeit undoubted—advantage of an English public school training by copying more or less exactly the whole structure.

But, to come to close quarters with the question, it will be admitted that the root-idea of the opposition to co-educational boarding schools is what is called the "moral danger." It may then be stated at once that the writer's own experience at Keswick has greatly strengthened his belief, based on theory and information, that to introduce girls into boarding schools, far from increasing the moral danger, will tend to cause its disappearance. Richter's sentence, oft quoted in America, puts the case concisely. "To insure modesty I would advise the education of the sexes together; for two boys will preserve twelve girls, or two girls twelve boys, pure amidst coarse jokes and suggestions merely by that instinctive sense which is the source of natural modesty. But I will guarantee nothing in a school where girls are alone together, and still less where boys are." The monastery system is the one point where our boarding school system touches the French, and probably it is the worst. It is indeed the added danger of immorality in boarding schools that has enabled day schools to keep a considerable number of boys who would otherwise have gone to boarding schools. The English parent is apt to take a great deal on trust, and often to measure the excellence of a school by the amount of its fees; but when a boy in a famous public school (the case is known to the writer) who had always shown the greatest love for it, writes home imploring his father not to expose his younger brother to the terrible danger of contamination there, it must make the most thoughtless person pause. It need not be admitted that large boys' schools are necessarily tainted with the evil, but that the danger is very great is certain, and with the opponents of co-education rests the burden of disproving the assertion that co-education is not an aggravation of the evil, but a cure for it. (See also below.)

A word may be added here in answer to the question which is likely to be asked, "Must you not have different boarding-houses

for your boys and girls, and, if this be so, how are you making an attack on the monastic system?" There is little doubt that the ideal method is to have one wing for boys' dormitories and another for girls', with master's house and common dining hall, library, day-room, etc., in the centre. And this might still be done, even in the case of a large school with several boarding-houses. But experience shows that even where the boarding-houses for boys and girls are separate, there will still be sufficient inter-relation between the two sexes to modify greatly that unnatural sexual tension which is the root of all immorality. There lingers probably in the minds of those who look back upon their own school experiences of twenty years ago, or even less, a feeling that much of the strength of character derived from boarding-schools is to be traced to that necessity of "roughing it" in the house which cannot be retained as part of the co-educational system. But as a matter of fact the "roughing it" has for good or evil disappeared in large measure already and is clearly doomed under any system whatsoever. We must look to very careful discipline in school and out (especially perhaps the development of training for athletic purposes) to take its place.

2. *Social Distinctions.*—In America, as is well known, free education does not mean the provision of a supposed sufficient *minimum* of teaching to those whose parents cannot afford better, but rather the best education which the wisdom and the power of each State and municipality can provide, maintained by generous, often lavish, expenditure and given freely to all her children. The little immigrant boy just arrived from Ireland may find himself seated next to the daughter of a leader of society. It is not the concern of this paper to discuss the relative merits of the English and American systems, but it is essential to point out the curious fallacy by which the absence of social distinctions in an American school is made to tell against the adoption of co-education in our secondary schools. "Yes," it is said, "co-education is successful in the common schools of America, but then it is also practised in our elementary schools. It is a very different thing to suggest its adoption in secondary schools, where social distinctions must be observed." The true inference is of course exactly the opposite. Though the conditions of American society are of necessity widely different from our own, the educated American is no less aware than ourselves of the worth of culture, and were it found that the mixing of the social strata in their schools caused a general levelling down of manners, or that their daughters ran a risk of undesirable entanglements, the higher class of Americans would most certainly not send them to the common schools, as universally as they do. As a matter of fact, the writer's own observation, supported by the unanimous testimony of all whom he had the opportunity of consulting, was to the effect that, whereas the levelling up was most surprisingly apparent, no signs of the reverse process were to be detected. If in some schools, whether in England or in



America, manners deteriorate from the home standard, this result is due to the defective culture of the teaching staff and not to the influence of a certain number of less-cultured companions. The success of the American common school is in fact the extreme case, which should prove the chimerical nature of any alarm based upon social distinctions. On the other hand, it is impossible to ignore the weight of testimony which goes to prove that by contact with the other sex the manners of both boys and girls are invariably improved, and that the self-consciousness which is at the bottom of the *gaucheries* of the one and the hysteria of the other tends to disappear.

3. *Range of Ages*.—The difference in range of ages is more apparent than real, the American high school (which most nearly represents our public school) being merely the continuation of other schools where boys and girls have already been taught together for as much as eight years. It is clear, however, that the risk is not in bringing them together too early, but too late. Either children should be entered at public schools not later than at 12 years old, or their preparatory schools should also be co-educational. There are indeed signs that many English parents who are not yet prepared to try co-education in public schools are quite willing to have their children educated together in the earlier stages. There are already many excellent co-educational preparatory schools in existence.

4, 5, and 6. *Corporal Punishment, &c.*—It is here that begins the widest cleavage between the systems of the two nations, and it must be frankly admitted that co-education has had something to do with the difference. Whether the physical chastisement of girls has ceased on account of a natural repugnance to the process, or rather because such a method of punishment has been found unnecessary, girls being by nature more amenable to milder measures, it is certain that public opinion in England would not permit even of the remote possibility of recourse to it. As a punishment for girls it must be definitely renounced. Nor can it be doubted that it has been largely by a logical inference from the one case to the other, and through a desire to treat boys and girls alike, that America has been brought to discard corporal punishment altogether. It must be recognised also that this natural tendency towards equality of treatment has been greatly assisted by the undoubted fact (*vide* American Report *passim*), that with boys and girls together discipline is much more easily maintained than with boys alone. Thus the ease with which teachers found themselves able to dispense with corporal punishment combined with the pressure of public opinion to effect its abolition. Doubtless the same causes would tend to operate in England, and it is this danger which, in the writer's opinion, constitutes the gravest problem for English co-educationalists to solve. Nothing seemed to result so clearly from a study of American schools as the conviction that in England corporal punishment for boys must at all hazards be

maintained. And this for several reasons. In the first place, American discipline cannot fail to strike an English schoolmaster as eminently unsatisfactory. Discipline in our public schools respects—and even relies upon—the freedom of the scholar. The best disciplinarian is the man who most thoroughly earns by his methods the respect of his class. But in dealing with the individual it is nevertheless—and the class demands that it shall be—autocratic. There must be no putting up with a passable obedience, nor with a half-measure of attention.\* Public school masters may differ somewhat in the standard of discipline they set up, but whatever that standard is there must be rigid adherence to it. There can be no compromise. In America it is conspicuously otherwise. Compromise is the regular system. It cannot be considered desirable that a boy should turn round and converse with the boy behind him or pull the hair of the girl in front, but these things are disregarded as long as there is a general attention to what is going on. The result is not so bad as an English reader may suppose, because of a radical difference between the boys of the two countries. Until the shadow of his final examination creeps over him, the healthy English boy makes no pretence to care for work for its own sake. If his master does not inspire sufficient respect, however capable he may be of imparting knowledge, the boy will learn nothing from him. In America it is different. Idleness is tempered by the commercial instinct. The boy drinks in with his mother's milk the creed that success in life is life's main object, and that to succeed one must work. The writer was told, as an instance of the importance attached to educational success, that in Harvard for some time there had been an average of one suicide yearly after the result of the examinations. It would not be just to say that there are no higher motives at work, or perhaps to claim any superiority for England in this respect. The fact that the English boy is too idle to think of the future, does not prevent him from developing the commercial spirit very fully later on. The difference is insisted upon here in order to show that the system of discipline which is employed not very successfully in America would be hopelessly inadequate in England. Corporal punishment must be retained. But there is another reason against its abolition. The English schoolboy has come to regard corporal punishment as an item in the charter of his liberties. To be so dealt with is his inalienable right and privilege. As a punishment it has indeed many signal advantages. It wipes off all scores. It is over in a few minutes. It does not interfere with cricket or football matches, or even with watching them. In a word, if co-educational schools are to hold their own in the estimation of those members of society who either are or have been public school boys, the point is in all seriousness an

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\* At a school well known to the writer, punishment is practically unknown. A new master is given a few weeks to show his quality. If his discipline passes muster, he is given no further trouble. If not—his life is made a burden to him until his departure, which is not long delayed.

important one. They cannot afford to earn the stigma attaching to those institutions which advertise themselves in the daily press as dealing out "no corporal punishment."

It becomes, then, of importance to inquire whether it is possible in a school for boys and girls to set up two different standards of punishment. The writer's experience at Keswick seems to prove beyond doubt that it is not only possible but easy. The method instituted there—not without anxious consideration—openly recognises that a difference will be made between boys and girls, and this not only in the matter of corporal punishment, but in the dealing out of punishments generally. If, for instance, a boy and girl be found talking together in class, and seem equally to blame, the punishment will probably fall upon the boy alone. From the very beginning the system has in no case seemed to the boys an unjust one. On the contrary, there have been abundant signs that it is in happy agreement with an instinctive feeling of chivalry which certainly does them no discredit.

We arrive then at the conclusion that the strenuous discipline which is one of the best traditions of the English public school system, and perfectly adapted to the peculiar nature of the English schoolboy, need in no sense be relaxed in co-educational schools. That it will be much easier to maintain has, as stated above, been already abundantly proved by experience wherever the system has been tried.

In connection with matters of discipline, it may be expected that at least some brief notice should be taken of certain questions naturally arising from the mixture of men and women teachers, which may be formulated as follows:—

(1) Would the teaching staff of a Co-educational Public School be necessarily a mixed staff of men and women? (2) If so, would men and women be employed indifferently in all forms in the school? (3) Would it be practicable to have a woman as head (*i.e.*, with those powers over the staff of teachers at present usually enjoyed by the headmaster of a boys' school)? Or would women be virtually excluded from the highest posts in the profession?

The writer's answer to (1) and (2) is undoubtedly Yes. To exclude women from the teaching staff would be to yield up one of the greatest advantages which co-education can claim to offer. To deny woman's usefulness as a teacher would be really to refuse her any place in the world's moral order—or to limit it to an influence over babyhood. Co-educationalists at all events cannot dream of offering any such insults to the sex. But it will at the same time be granted, even by those who have the greatest faith in woman's capacity, that exigencies of discipline would make it desirable to proceed somewhat cautiously both as to the number of women introduced and as to the work allotted to them. That both teacher and taught will have a good deal to learn before working relations are quite satisfactorily established may be taken for granted. But if women generally share the confidence which the writer feels in their capacity, they will not complain of beginning with the lower forms (where indeed their

methods - possess already manifest advantages) and in a numerical minority. The rest may be left to time and its unerring tests.

Unfortunately there is serious danger that economic conditions may interfere (as has been the case in America) with reasoned development. Inadequate as are the salaries offered to assistant-masters in any but the wealthiest schools, they are still double those usually obtained by mistresses. Though the disproportion in salaries is considerably less marked in America, it has had the effect of supplanting men-teachers by women to a far greater extent than would be permitted by unprejudiced opinion either public or expert. In one famous school (ages 15 to 18) visited by the writer, out of a staff of 20 no less than 16 were women. The numbers for America (in schools for all ages) are 65,000 women teachers to 5,000 men!

It is earnestly to be hoped that such paltry and essentially unjust considerations of economy will not be allowed to operate to the grievous disadvantage of the new system. Perhaps registration of teachers may prove to be the way out of the difficulty by tending to the equalisation of salaries.

The question as to the possibility of women being admitted to the headship over a mixed staff must be answered in the same spirit. Definitely to exclude women would be fatal. Too hastily to make the experiment would be unjust alike to the woman and to the school. When the time and the woman appear there will be no cause to fear for the result.

In America a large number of the most successful schools for boys and girls aged 12 to 15 are conducted by a headmistress presiding over a mixed staff. In High Schools, on the other hand (ages 15 to 18), the writer met with no instance of a woman at the head, nor any agitation in favour of trying the experiment.

7. *The Prefectorial System.*—The difficulty alleged to exist in applying our Prefectorial system to co-educational schools is based upon the impossibility of giving a boy authority over girls, or (worse still) a girl over boys. And the absence of the system in America is pointed to as the proof of its inadaptability. The solution of the difficulty is—like that of Columbus' conundrum of the egg—exceedingly simple when it is stated. Let the boy-prefects have authority over the boys alone, the girl-prefects over girls alone. The system has worked flawlessly at Keswick; nor is it easy to anticipate any objections to it. As a matter of fact, the Prefectorial system is beginning to develop rapidly in America amongst the high schools; and the reason for its comparative absence hitherto has been rather the lack of any control over the scholars outside the class-room than any difficulty connected with co-education.

8. *Standard of Advanced Knowledge on Leaving School, &c.*—We come now to an exceedingly interesting difference between the results obtained by secondary education in the two

countries. Nothing is more striking to the English visitor in American high schools than the comparatively elementary nature of the work done in the highest forms. In Classics, the head of the school, who in England will have read a considerable amount of Cicero, Livy, Juvenal, Plautus, Martial, Ovid, Vergil, &c., &c., and in Greek the tragedians, Demosthenes, Thucydides, Herodotus, Homer, &c., and will be able to turn English prose or verse into Latin or Greek at all events with rapidity, will be found in America to be still struggling with Cæsar and Xenophon and the early books of Vergil and the Iliad, whilst he will probably be far from certain of his quantities in either language. And in Mathematics the difference is nearly as remarkable. It is true that in French he will be at least on a par with his English rival; whilst in English and other subjects—but in English and other subjects there is no standard in England at all. Here and there—probably on the modern side of a good school—some excellent work is done; elsewhere chaos reigns and splendid chance. However, we are accustomed in England to measure all schools by Classics and Mathematics, and America's undoubted inferiority in these subjects has been laid to the door of co-education. Girls, it is said, are incapable of digesting such solid food readily, and boys have to sink to their standard. There is not a word of truth in the allegation. It has really been proved over and over again in both countries that, if girls cannot altogether hold their own against boys in Classics and Mathematics, the difference is so slight as to cause no difficulty in class-arrangement. By a strange confusion of thought the arguments of anti-co-educationalists seem often to presuppose the necessity of dividing each form equally between boys and girls, the best of one sex to be dragged down to the level of the best of the other! The fallacy requires only to be stated.

The true reasons for the general absence of advanced knowledge in American schools have already been given or hinted at. It must be admitted that the somewhat gentle, give-and-take style of teaching—making no strong demands either upon the learner's attention or previous industry in preparation, covering the ground slowly and raising questions rather than dogmatically answering them—is in some degree responsible. Classics at all events seem to demand something of that strenuous style which appears to be equally essential in the training of a college eight. A far truer explanation, however, is to be found in—what has been already hinted at—the much greater width of the American course. The writer remembers a curious meal partaken of by the passengers of a train waiting for about 20 minutes at Springfield, Mass. One sat down in a hurry opposite a plate, and an army of waiters, going round in quick succession, dumped down upon this same plate a remarkable series of courses—pork chops, baked bananas, beef, chicken, Boston beans, and orange salad—the next arriving before the last was finished. Compare this with the one dish with which an Englishman would have contented himself under the circumstances, and you get at the



characteristic difference between the *curricula* of the two nations. In England there is specialisation in one subject, a certain amount of time is grudgingly given to one or two others, and the rest are neglected altogether, or allotted that occasional half-hour which boys and masters look upon instinctively as a breathing-time. In America, on the other hand, the multiplicity of subjects is bewildering. "This thing ought to be learnt, we will teach it," is the national attitude; and although educational values are beginning to be studied, and a larger percentage of school time devoted to some subjects than to others, yet the school-day (there is usually but one session, 9 a.m. to 2 p.m.) is so crowded with instruction on the most various topics that advanced knowledge in any one of them is not possible. The whole question as between the two systems is one that deserves to be separately and most carefully dealt with. The mean doubtless has still to be discovered, but the Americans are probably nearer to it than ourselves. It is impossible to do justice in this article to the many compensating details of their system—their elective schemes at the University, their post-graduate courses, their incessant efforts to improve both the theory and practice of education. It was necessary to show that an aspect of American methods upon which English critics have fastened was not due directly or indirectly to co-education.

9. *The Influence of the Examination System.*—The examination system, which is the greatest blot upon our own secondary education, is the cause of that very narrowness of range which is more to be deplored than the American complexity. If co-education will, as its opponents claim, place difficulties in the way of examinations, then that will not be the least service it will effect in the cause of education. Anything that would tend to lessen the hideous number of quite purposeless examinations that an inexhaustible parental appetite and a jealous competition between educational or quasi-educational bodies thrust upon hapless schoolmasters, should be received with open arms by the profession. It is not beyond hope that the far more difficult question of examinations for entrance into the Services may some day find a solution which will save our public schools from becoming cramming establishments. It is, however, difficult to see what bearing co-education can have upon the matter. In large schools there will still be the Army and Navy Classes, Matriculation Classes, Scholarship Classes, and all the other abominations which make an ideal scheme of education, worked out properly, from the first year to the last, impossible. In smaller schools the same results will be attempted by individual tuition, in school and out, adding to the burden of the hard-worked assistants. But inasmuch as one-half of the scholars will be free from these necessities, a more regular *curriculum* will be attainable, and a larger staff available amongst whom to divide the emergency-work of special preparation. (See also Appendix.)

10. *Athletics*.—It has been argued that girls will contend with boys on less equal terms in England than in America owing to the paramount importance attached by our public schools to athletic distinction. A boy, it is said, gains influence amongst his fellows, not to say greater consideration from his masters, in proportion to his success on the cricket or football field. Games in America are not an organised part of school life as they are in England. It is true that in an American school there will be many enthusiastic football or baseball players, but they form a club by themselves with which the rest of the school has no particular concern. Influence in the school does not, to any appreciable extent, depend upon athletic success. If girls are to be educated side by side with boys, must they not win at least an equal place in estimation and influence? And will this be the case in English public schools where the physical still dominates the intellectual? The question is not an unimportant one, and the influence of co-education upon athletics, and *vice versa*, will be watched with great interest; but the premises are too uncertain to lead to a conclusion seriously hostile to the education of boys and girls together. In the first place, the actual share of athletics in determining the estimation in which any boy is to be held is very difficult to define. Everyone is acquainted with cases of boys and men highly distinguished in athletics for whom their prowess has entirely failed to be a passport to popularity. It would be nearer the truth to say that athletic success gives an opportunity of influence which may or may not be improved upon according to the character of the boy. It would be a totally unjust satire upon boys' power of judging the character either of their fellows or of their elders to suppose them to be finally affected by mere externals. Sisters are not generally unable to hold their own against their brothers in the home, or content to be estimated at a lower value, and it will doubtless be found here, as in America, that co-education tends rather to increase mutual respect amongst the sexes than to diminish it on one side or the other. In the second place it may be doubted whether girls may not come to participate equally with boys in the athletic side of school life. Anyone who has seen how totally untrained girls in a new school can turn out a really good hockey team in a term, not only displaying the utmost "patriotism" over their team themselves, but winning no less interest from the boys, will hesitate to deride the notion that athletics may be destined in the near future to play as important a part in the development of public school spirit amongst girls as they do now in the case of boys.

11. *Freedom of Intercourse between Men and Women*.—The last point of difference to be noted between England and America is harder to deal with than the foregoing. Nothing in America is so contrary to English notions of etiquette, often indeed of propriety, as the freedom permitted in the relations of the sexes. A young man meeting a girl for the first time at a ball will there and then agree to call round for her in a dog-cart the next



night, and the two will go for a moonlight drive together without anyone being surprised. And instances of the same nature might be multiplied *ad infinitum*. The difference goes deeper and has a more constant influence on daily life than any mere example can indicate. Into the merits and demerits of the system as it stands there is here no space to inquire, for it is a question of wide range and much complexity. Yet it cannot be denied that, though in the opinion of the writer co-education has had little to do with bringing about freedom of intercourse in America, the adoption of co-education in England would tend naturally to weaken, and in time to break down, some of the artificial barriers that Society here has set up.

It may be that it is round this point that the opposition to co-education will mainly rally. Its advocates must be prepared to find a certain number of people who will say: "You admit that it will be putting the thin edge of the wedge into the barriers which we consider essential. Rather than undergo any such risk, we will oppose co-education with all our power, however harmless—even desirable—it may be in itself. England must preserve at all hazards the few remaining safeguards existing for the protection of Society." Without arguing the whole question—it might profitably be thrashed out elsewhere—there are two considerations which may be advanced. The first is that no compulsion will be used against Society. If the barriers fall, it will be Society's own doing. The introduction of the cycle has caused a very appreciable advance in the freedom of women. But it has not compelled the advance. When it threatened "bloomers" Society said No, and has been quite able to enforce its veto. Seven-day newspapers were unable to survive the protest entered by Society against them. The truth is that that opposition is doomed to failure which directs itself against a good thing through fear of following evils. If they be indeed evils, there are forces competent to deal with them under whatever circumstances they may arise. It may be that they will but prove details in the march of events for which the times are not yet fully ripe.

In the second place, it may be well to remember what is at bottom the danger against which these social restrictions are intended to guard. It is certain that—speaking broadly and passing over some side motives, chiefly mercenary—the barriers in the way of free intercourse between the sexes are intended to preserve moral purity. Looked at thus directly, the matter resolves itself into two questions: How far are the barriers necessary? And how far do they attain their object? The question of moral purity concerns a nation perhaps more deeply than any other. It is linked in history with the rise and fall of empires, the strength and decay of races. It would be an ill day for England if we ceased to care to guard against social impurity. But do we—as a matter of fact—rely upon those artificial safeguards which are the remnants of mediæval methods? If this were so, should we not logically carry them at least as far as do the French?

The success with which we have combated the disease is very one-sided and very far from complete. We cannot claim to have done more than preserve a certain national conscience and—at least as regards our women—a national abhorrence from the evil wherever it shows itself. But, such as it is, our success has resulted from quite other safeguards than artificial restrictions. Early training, religious teaching, the strength of the Puritan spirit in our middle-classes, these have been the barriers which have protected us from the worst features of national immorality. But whilst they have given strength to resist the temptation, they are not in themselves capable of removing or weakening it.

Now it is precisely this weakening of the temptation towards impurity that is the greatest benefit which it is hoped by the advocates of co-education will result from its adoption. It is believed that the family is the great type of pure human relationship, and that there is no reason why the “family” should not be more and more extended in meaning until it embraces all those with whom the boy or girl is brought into intimate contact from the earliest years upwards. That it may be so is admitted by high scientific authority; the proof that it is so can only be sought in experience. Nor is the evidence lacking. The writer made special efforts, when in America, to obtain the experience of teachers, parents, ministers, medical men, &c., upon this point, and was astonished at the practical unanimity with which they advocated co-education upon moral grounds. The same preponderance of opinion is to be found in the exceedingly careful and detailed report upon co-education to be found in the U.S.A. (Commissioner of Education) Report for 1891-92, Chapter 26. Besides the testimony\* of the Commissioner himself, a man who, in addition to his exceptional opportunities of studying educational results, has a very wide reputation for philosophical acuteness, page after page of the report (pp. 784-859) reproduce the experience of every class of investigator with the same result. It may be noted especially that in the Boston School Document (in Boston the high schools are *not* co-educational), out of 39 physicians whose opinions were obtained, 29 favoured co-education, whilst of the 10 opponents the majority were influenced seemingly by hygienic rather than moral considerations. In the same document, 37 of the clergy are in favour of co-education out of 46 answering, whilst of the other professions (not including teachers) more than 74 per cent. are of the same opinion. Going outside America, the excellent moral results of co-education in Norway and Finland are well known, and have been contrasted usefully with the effects of the restrictive system upon the morality of

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\* “I had noticed that the atmosphere of ‘mixed’ schools was desexualised, where that of separate schools seemed to have a tendency to develop sexual tension. That the sexual tension be developed as late as possible and that all early love affairs be avoided is the desideratum; and experience has shown that association of the sexes on the plane of intellectual contest is the safest course to secure this end. Dr. W. T. Harris, *loc. cit.*, pp. 806-807.

the French. It is interesting to note in this connection that the delegate of the French Government to the Chicago Congress in 1893, in a report to the Minister of Public Instruction, sums up the arguments on this question of morals in favour of co-education. After quoting Dr. Harris, the report continues: "The habit of being educated together is for young people of both sexes a better safeguard against love than continued separation. A girl whose companions are almost exclusively of her own sex becomes romantic and is easily enamoured; but one who has been always associated with young men, having experience and maturity, does not yield to extravagant enthusiasm. Moreover, in the love that may spring up in the mixed school there is nothing to alarm the severest moralist; and because the young American girl has a profound sense of her dignity, the young man a great respect for the woman, and both together the habit of self-control, there will result only a marriage in which the tenderness is the more enduring because the husband and wife have so long known each other. It would be well if such marriages should happen often." Such testimony from such a quarter is almost startling. To it may be added that of the distinguished French educationalist, Dr. Compayré (*Revue Pédagogique*, 1893): "From a moral standpoint I discovered only healthy results from the American co-education."

The evidence seems to lead to the conclusion that in this most important matter of morals it is the advocates of the separation of the sexes who are put upon their defence.

So much for the objections which have been advanced to the adaptation of the American system to England. The benefits which might be expected to result are dealt with elsewhere, and a lengthy consideration of them does not come within the scope of this paper. They may be summarised in a few words as (1) Vast economy of expenditure. (2) A return to the natural system. (3) Discipline made easier. (4) Intellectual stimulus. (5) A better balance in instruction. (6) Improved manners. (7) The prevention of extremes either of masculinity or femininity. (8) A safeguard against the moral danger.

It is to be remembered that our present system cannot be said to be the outcome of a settled policy of separation. It originated at a time when girls were not sent to school at all, and, as the nation awoke by degrees to the necessity of education for women, it was natural to start schools for girls only rather than introduce them into those already existing for boys. Even now it would not, to the writer at least, seem desirable to make an assault upon the established institutions. A century may well be spent in determining the issue once for all by the law of the survival of the fittest. Moreover the new system will have a better chance of success in schools started for the purpose. School traditions are a conservative force which cannot always be successfully opposed even by the authorities and which for the rest has not a little to recommend it. But many hundreds of schools have yet to be founded, or refounded, or reorganised, before our system of secondary education is complete, and it is

in these cases that the advocates of co-education have a right to demand a fair and careful hearing. It is likely enough that in out-of-the-way country places, and in some of the small towns, especially in the North and Midlands, considerations of economy will produce co-educational schools without need of further agitation. But this is just what co-education has to fear. It claims not to be sown only on the poorer soil which will not support its rival, but to be set side by side with the old system under equally favourable circumstances, and to receive a fair trial as to its fitness to become ultimately the national method. At least three or four co-educational schools should be started with an endowment which would enable them to begin under as fair auspices as Wellington or Clifton. A Royal Commission, if need be, or a permanent Committee, should be appointed to inquire into the system, its possibilities, and its present measure of success. And that part of the nation, lately somewhat increased, which takes an intelligent interest in the great problem of education, should make up its mind that here at least is a question which has earned the right to be settled upon its merits once for all.

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As two years have elapsed since the preceding pages were written, it seems fair to add in conclusion that the writer has seen no reason to alter any opinion therein expressed; but that longer experience has only deepened his conviction of the enormous advantages inherent in Co-education. Nor can there be any doubt that there is a large and growing interest in the subject. Scarcely a week passes without inquiries into the system in force at Keswick from County Councils, Governing Bodies, and others interested in education. It seems certain that a few years must decide whether the system is to receive the full trial which it merits, or fall a victim to the fatal advocacy of those who cry out for the cheap—even if it be nasty. To this section must be attributed those schools already started, in which boys and girls are collected under one roof—to save bricks and mortar—but kept separate. It is difficult to imagine any possible defence of a system which reproduces, in a very aggravated form, the worst dangers of the boys' school, with an academy for young ladies across the road, and terrible injunctions against inter-communications. As a fact—if much testimony is to be believed—the result, in some cases at all events, is fully as bad as might confidently have been expected.

CECIL GRANT.

Keswick School,  
August, 1901.

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## APPENDIX

The following questions have been put to the writer by one who has seen the foregoing. The answer to them does not come properly within the scope of this paper, but they are of such interest in themselves that no apology is needed for appending them here, together with a brief suggestion as to the direction in which an answer may perhaps be sought.

What influence, if any, do you think that the general acceptance of co-education in higher secondary schools would have on the *curriculum* of studies? And you regard it as desirable and natural that University endowments (scholarships and fellowships) should be made available indifferently and on the same terms, for young men and young women? Suppose there were protracted difficulty in overcoming the present indisposition of Oxford and Cambridge in this regard, would the present requirements of the college scholarship competitions at Oxford and Cambridge determine in co-educational schools the course of study for girls as well as boys on lines now specialised with a view to the scholarship-prospects of boys only? And (to state the same point at a higher stage), would you have the Civil Service appointments and examinations—now so largely influencing the University studies, and perhaps, indirectly even the school studies, of many of the most able young men—open indifferently to men and women?

It must be remembered that most of these things are themselves either changing or ripe for change, quite independently of the influence of co-education. Its friends, if they are wise, will aim rather at shewing that it can adapt itself to the best methods and opportunities of the time than at claiming the necessity for important simultaneous reforms. The objection which is felt by even the strongest co-educationalists to any assault upon schools such as Rugby and Tonbridge and a hundred others, which have earned a title to reverence under the other system, applies in equal force to an attempt to take the two Universities by violence. Certain agitations in this direction combining the natures of a leap-year proposal and a foot-paer's menace, have done more harm than good to the cause of women's education. The pioneers of steam locomotion did not attempt to turn highways into railroads by Act of Parliament; and, if the new system feel the need of a new University, it must be prepared itself to supply one. But after all scholarships and exhibitions are but a small part of education, and it is to be hoped that the promised revival of interest in secondary schools will tend rather to free boys and girls from the bondage of examinations than to add to the present intolerable strain. It is time that the great principle for which Thring fought should be finally established, and more attention paid to those boys and girls of sadly limited capacities who form the considerable majority in schools which are unable to pick their material, and for whom public examination in any shape is but a purposeless torture. Fortunately there is hope that inspection will soon be within the reach of all and will gradually lessen the temptation towards certificate mongering that is a worse bane to the smaller schools than examinations for scholarships and the services. Posts in the Civil Service will doubtless be largely thrown open to women before long, but the long and expensive training necessary to obtain them, combined with the impossibility of holding them after marriage (unless the social order is to be changed indeed), will deter any but a comparatively small number from competing. College Scholarships are more likely to be sought after, but they are already (at least at Oxford) more consistent with a wide school *curriculum* than any other examination.

On the whole it is probable that whilst girls will be introduced (much to their advantage) to a more serious study of Greek and Latin, the general effect of co-education will be to place such educational subjects as English, drawing, and music (especially class singing) on a firmer footing and delay the period at which dullish boys must either specialise in Classics or sink into the hopeless quagmire of the modern side.

# EDUCATION AND INDUSTRY

## IN THE

## UNITED STATES.

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# EDUCATION AND INDUSTRY IN THE UNITED STATES.

## PART I.

The earlier pages of the present paper are written partly as an independent study, such as was naturally made side by side with an inquiry into the moral forces in American education, but more especially to lead up to Commissioner W. T. Harris's testimony before the Industrial Commission at Washington on January 11th, 1899, and to what is contained in the Appendices. In his testimony, as will be seen, Dr. Harris, with characteristic thoroughness and insight, deals with the subject quite as much from the economic side as the educational, a fact which in itself illustrates the American habit, elsewhere spoken of, of definitely regarding education as a department of sociology. (*Part II. Extracts from Dr. Harris's evidence, pp. 202-227.*)

The commercial movements of recent years have led English politicians of all shades of opinion to associate the ideas of education and commercial supremacy. Especially has our notice been called to the very obvious connection between the system and methods of education which obtain in Germany and the immense strides Germans have been making in the markets of the world. More recently American movements have been studied from the same point of view. What is proposed in the present paper is to present in outline the movements of various kinds which have in recent years been made in the United States in the direction of industrial education, and more particularly to show what appeared to the writer, on the testimony of people he conversed with in various cities, and of the published reports of schools and colleges of various grades, to be the dominating spirit of these movements.\* The natural divisions under which the topic will fall are: (I.) Manual and industrial training in the public elementary schools; (II.) the continuance of such training in the public high schools, and especially in the manual training high schools; (III.) the work of institutes of technology and of universities; (IV.) special trade schools; (V.) truant and reform (*cf.* English "industrial") schools.

### (I.) MANUAL AND INDUSTRIAL TRAINING IN THE PUBLIC ELEMENTARY SCHOOLS.

It can scarcely be said that industrial and commercial considerations have been responsible for the introduction of manual training into the elementary schools of America. Far more seems to be due to questions of educational efficiency than of commercial necessity.

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\* At the risk of making the paper rather long, some of the more important expressions of American opinion will be quoted, in order to place before the reader some of the data from which the report, which is to a certain extent a compilation rather than a report, has been made.



that *learning*, in the sense of intellectual culture, is a form of, and an invaluable preparation for, more successful *doing*. In this place one may pass over the Kindergarten, merely stating the significant fact that the pronounced, almost unanimous, tendency among American primary grade teachers seems to be to utilise and to continue to develop the powers of eye and hand, which is so largely the aim of the American infant school (this being, wherever it exists, the Kindergarten pure and simple). These grades are at the present moment a unique feature in American education; and there best appears the ideal relation of hand work to head work. Even if not perfectly adequate as an exposition of the aims of the infant school (ages four to six), the words quoted in the chapter on "The Kindergarten and its Influence,"\* become increasingly applicable and urgent as the school course goes on: "Our business is to let the children handle simple materials, to begin to test their power, and to enable them to realise that every material in the universe has its possibility. The child comes into a world of tools and materials which have at first no relation to him. We have to train him in hand and brain till he knows and can say, 'Life has things in it for me; it says things and opens up possibilities to me.'"

The illustrations that follow will show that here we have another of the characteristic attitudes of the American educator† tersely stated. It is the constant reference to life; a fact which tends to make education at once real in itself and real to the child. The *school* aim is to minister to, to enlarge, and to interpret *child-life*. Education is not so much handled as a process of preparation for life (even for "*complete living*"), but rather as an actual part then and there of life, and an expression by the learner of all the activity and capacity that is consonant with the social and educative purposes of the school. From this standpoint the hand is at once recognised as being the instrument of the mind. It is, to quote Mr. Liberty Tadd, "the projected brain." "With the hand man has lifted himself from savagery to civilisation." In all the best primary schools the constructive or hand work is a mode of thought expression. Learning, in other words, is not inwardly knowing; it is a power to do, a power of outwardly expressing. This is a kind of schooling that one absolutely cannot forget.‡ It is acquired industrial power, and at the same time it stands for more completely vitalised brain. This kind of education is being given in American schools more widely than manual training statistics show, and a similar remark applies to some cities which report manual training only in the upper grades. For example, in a report presented by Superintendent Siefert, of Milwaukee, in 1899, for the

\* *Moral Education in American Schools*. Chap. XIV.

† One may use a general expression like this with some freedom, as, owing to the methods of organisation described by the writer in his Gilchrist Report, there is a constant circulation of ideas amongst American teachers.

‡ Cf. the evidence given by various witnesses before the Royal Education Commission (1886-88), to the effect that children after leaving school quickly lose what they have learnt.

guidance of his board in drawing up a course of manual training for the schools of that city, Peoria (Ill.), reported no manual training: yet, under the heading of "Drawing" in the course of study for the Peoria schools, one finds:—

#### COURSE OF STUDY IN DRAWING.

##### FIRST AND SECOND PRIMARY YEARS.

##### 1. *To be studied*—

- (a) Type solids: Sphere, cube, cylinder, hemisphere, square prism, right-angled triangular prism.
- (b) Nature forms and common objects. Objects resembling these type solids.
- (c) Pictures: Pictures in which objects resembling these types may be found.

##### 2. *Observation*—

- (a) Of Form: In nature and common things. In type solids.
- (b) Of Colour: In nature and common things. In type solids.

##### 3. *Expression*—

- (a) By modelling in clay.
- (b) By laying colour tablets.
- (c) By paper folding, cutting, and making.
- (d) By stick laying.
- (e) By oral and written language.
- (f) By drawing with chalk, pencil, and charcoal.

##### 4. *Time*—Three fifteen-minute lessons a week.

##### THIRD PRIMARY YEAR.

##### 1. *To be studied*—

- (a) Type solids in review from second year.
- (b) New type solids: Ellipsoid, ovoid, equilateral, triangular prism, cone, square pyramid and vase form.
- (c) Nature forms and common objects.
- (d) Pictures: Pictures illustrating these type solids and objects.

Observation, Expression, and Time the same as in second year work

The purpose of the present paper will best be served, probably, by giving instances of cities which have manual training throughout the grades.\* (Pages might be filled with quotations from superintendents' reports stating the educational grounds on which manual training has been introduced.) In the lower grades the manual work is, as will be judged, generally co-ordinated with some other part or parts of the school work. The examples of the University Elementary School, Chicago, and the Ethical Society (Workingman's) School, New York, have been quoted in the foregoing report on Moral Education in American Schools. The general aim of the former school is there stated (Chapter VI).† The director of manual training stated the purpose of the work at the

\* The fact that there are English towns which have introduced somewhat similar work throughout the standards will add to the interest with which these courses are studied. See also page 209.

† See also "School and Society," by John Dewey; "Individuality and the Moral Aim in American Education" (Gilchrist Report: Longmans), pp. 175-76, 217-18; and pp. 121-125 of the present paper.

**Ethical Culture School, New York,**

to be to give ideas of construction, to combine the knowledge or information side of school work with doing or practice, and to give an insight into the industrial world outside ; a great point is made of getting the children to do co-operative (or "project") work. Manual training, said this teacher, is akin to mathematics. "It is a study of quantities and their relations. It trains what might be called mathematical perception ; seeing things aright and quickly. Secondly, it relates to the outside world. The boys imitate bridges, boats, etc. ; grasp the simple laws of structure. The boy sees the building framed up (a reference to the steel frameworks necessary in the high, many-storied buildings which are common in New York), knows the suspension rod, etc. ; but he likes also to deal with forces himself. (The bent iron work, providing problems in stress and strain, is elsewhere referred to.) Thirdly, manual training furnishes a purpose for work. The boy is full of the feeling, 'When I am a man, I want to do this or that.' Manual training gives him a chance of *doing*. We want doers, men who work with a purpose, not readers of magazines." This school, founded in 1878 under the auspices of the Ethical Culture Society, resembles a public school in embracing among its pupils all social classes, and in being conducted for educational purposes only, with no thought of pecuniary profit for the managers. It has for its chief purpose the building up of character, but on a purely unsectarian basis. The special features of the school are : Manual training and art instruction in all classes ; special attention to elementary science teaching throughout the school ; universal history and literature ; regular excursions to industrial establishments and to the parks and surrounding country for observation and study. The method applied in all branches has been called by the founders of the school, the "creative method." Direct moral instruction supplements the general moral training afforded by the work and the influence of the school as such. Besides supplying the elements of a broad and generous culture, it is the particular aim of the school to discover the individual bent of each pupil, to train him along the lines of his natural aptitude, and thus to prepare him mentally and morally for his future vocation. (See Chapters IV., X., and XII. of Report on "Moral Education in American Schools.")

The newly drawn up scheme for the public schools of the **City of New York** has also been presented (Chapter XII. of the same report). The intention of the scheme is, in the words of a New York principal, "to have throughout the city a regular chain, from the kindergarten up to the manual training rooms, called manual training." In this principal's school the disposition was to correlate the manual training with nature study, Hough's "American Woods" (mounted specimens cut to an extreme thinness and suitable for microscopic work) being one very interesting and valuable part of the apparatus provided.



The first part of the study includes a review of the literature on the topic of the study. The second part of the study includes a description of the research methodology used in the study. The third part of the study includes a description of the results of the study. The fourth part of the study includes a discussion of the results of the study. The fifth part of the study includes a conclusion of the study.

The study also includes a description of the research methodology used in the study. The study also includes a description of the results of the study. The study also includes a discussion of the results of the study. The study also includes a conclusion of the study.

work, and the study of the spectrum, using a prism glass, and cutting oblongs in coloured paper (2 by  $\frac{3}{4}$  in.) of all the colours of the spectrum; the associated language work is to learn the right use in sentences, describing the forms and positions of the objects modelled, of: right, left, on, under, middle, centre, sphere, circle, roll, stand, cube, face, corner, edge, smaller, larger, round, square, flat, cylinder, oblong, hemisphere. It will at once be seen how easily these exercises follow upon those of the kindergarten. This work occupies the first four months of the year, September to December. It is followed by tablet and stick-laying (using coloured sticks); paper folding and mounting; water-colour painting being optional. The same materials are used throughout the second year. In the third year, after four months' modelling, object drawing is introduced; the objects first modelled, and afterwards drawn, being bottles of various forms and proportions, vases and other pottery, potatoes, apples, nuts, gourds, and other available objects (based on geometric solids); paper cutting and folding follow during the last four months of the school year. In the fourth grade the same materials are made use of, and the children begin to make panels in clay of simple designs. The fifth grade sees the work becoming more exact; "arithmetic has gone into it"; the ruler is brought into play, and solid figures are constructed, some study being made not only of lengths, but of areas and contents; the modelling is done to definite proportions, *e.g.*, cylinder and cone (4 by 2 inches) and patterns in cardboard and paper of cubes and square prisms, triangular prisms, and boxes square and oblong, are developed from working drawings. In this year some relief modelling is done either from copies, from the shaded flat (both bas-relief and incision) or from nature. This work is done in the grades, and under the direction of the ordinary teacher. The sixth grade develops the work of the fifth, some two or three lessons each year being given in relief modelling, largely for the purpose of keeping the pupil's hands in sympathetic touch with plastic material, but upon more advanced lines.

The drawing of objects is never done from the flat copy in Washington, but always from objects; the flat is only used as a copy for modelling. In the sixth year the boys have two hours a week in the manual training shop, and the girls two in the sewing room. In the seventh grade clay modelling is done from objects; some excellent work of this kind was seen at the Peabody School, consisting of flowers, leaves, branches, fruit, and original designs in relief. This part of the work is done both by the boys and the girls in the ordinary class-room. Other original designing is done by the girls in sewing, the making of ornamental pillows, etc., and by the boys in wood, boxes, stools, etc. The eighth year carries out more fully the work of the seventh. During the writer's visit to one of the manual training centres a boy was just finishing (or had just finished) a work-box which he was making as a present for his mother; the lid was of his own designing, and both inlaying

and dovetailing were samples of good workmanship. "At the end of the course," said the superintendent, "there is naturally a great difference in what the boys can make; the work of one may be plain and comparatively coarse, whilst that of another is highly finished. One boy will be nearly as long making a plain shoe-box and take as much trouble over it as another in making a work-box inlaid and with a thoroughly good design. As soon as they have had a series of lessons they are set to work on their own lines. They are not made to do any particular thing, but simply influenced, directed, and helped. When a pupil makes a piece to take home he finds his own material, though gifts of material are made to those unable to purchase. At the end of the year there are car loads of articles from the different shops, from shoe and knife boxes to inlaid tables, music racks, corner cupboards, desks, card-tables, work-boxes. There are eighteen manual training centres in the city for the white schools, and nine for the coloured, the cost per pupil being respectively \$1.19 and \$1.41." The writer brought away with him a photograph of one end of the room which he visited, showing the great variety, and it must be added the great excellence, of the work of these seventh and eighth grade boys. The boys' drawings for the wood work are made as part of the regular course of drawing in the grades, which means that many of the grade teachers have to rely a good deal upon the drawing supervisors. Whilst the boys are in these two grades the girls go to the cooking schools. The programme of the work in the shops is as follows:—

#### WOOD.

##### SEVENTH AND EIGHTH YEARS.

###### *Bench Work—*

The correct method of using planes, handsaws, chisels, gouges, brace and bits, hammer, gauge, clamps and other tools, in the working of different kinds of wood.

All construction is from drawings executed by the pupil.

##### HIGH SCHOOL—FIRST YEAR.

###### *Lathe Work—*

The proper use of the hand wood-turning tools in the various operations of turning. Blue-prints used are taken by pupils from their own tracings and drawings. Iron work commenced.

##### SECOND YEAR.

#### IRON.

###### *Forging—*

The making and management of a forge fire and the forging of small articles of iron involving all fundamental operations. Steel tool-making, hardening, and tempering.

##### THIRD AND FOURTH YEARS.

###### *Machine-tool Work—*

The use of engine-lathe, planer, sharper, drill-press, and hand-lathe, in the various processes of metal-turning, boring, thread-cutting, planing, slotting, drilling, polishing, etc., upon cast-iron, wrought-iron, steel, brass, and composition.

Two visits were paid to the manual training department of the

Central High School, the first under the guidance of the exceedingly able supervisor of the Washington High Schools and the director of manual training in the city schools; the second with the city superintendent. The course is "developmental," that is generally educative rather than specific, and is such that with a moderate amount of practice in specific application of the general principles acquired, the pupils are capable of doing work equal to that of the best artisans of the country. An electrical engine was in use in the workshop made by the boys themselves; a gas engine was in process of making from the boys' own drawings; this work is, of course, co-operative, different parts being made by different groups of pupils, but "the unifier is the instructor," and each learns how to make the whole as well as the part upon which he happens to have worked. A big workshop lathe had been made in a similar manner. This work was being done in a building which was only being temporarily occupied, an appropriation of \$197,000 having been made for the purpose of building a manual training high school. Referring to the manual training work as a whole, the director said that a fair number of the special teachers have the ability to grip the man in the boy, appealing to his industrial instincts and ambition over and above the training given in mechanical processes. "About half of the men appreciate that they are teaching boys rather than a subject." That is the phase of the work which the director said that he himself had most at heart.

Amongst the cities also having manual training throughout might be mentioned Boston, Brooklyn, Minneapolis, Dayton and Orange (N. J.). The courses differ considerably, but the principal feature of the work in the primary grades is the continuation of the constructive work and the form and colour studies of the Kindergarten, with a gradual approximation to the more definite manual training work of the upper grades. Part of the aim, therefore, is to use the child's instinct of active research, often applied destructively, for constructive and educative ends. Most American teachers with whom the writer conversed seemed to be firm believers in the child's passion to create. Creativeness, inventiveness, self-expression—this is the active phase which American education is fast assuming, spurred on alike by the American feeling referred to in a foregoing report and by the consciousness of the necessity of some such outlet for physical and intellectual energy. Referring to the definite introduction of manual training into the St. Louis schools in 1899-1900, the superintendent writes :—

"Whatever may be the utilitarian value of the new feature of district school work—and it is admitted that it has such value—manual training, in the form in which it has been introduced, derives its chief importance . . . from educational reasons. The cultivation of the hand, in skill and deftness, is a matter of general education, since there is no relation or condition of life which does not directly or indirectly require the use of the hand. Hand-training benefits every individual, no matter what

occupation or vocation or position life will assign him. A Greek philosopher aptly said: "Man has reason, because he has a hand." The meaning of this paradox is evidently that the intelligence of man has developed and grown ~~up~~ with the practical demands which his physical environment has made on him as a worker. All the human inventions which form the pride and economic strength of modern times have followed in the wake of the improvement of hand labour. . . . The problem for thoughtful teachers has been for years, how to counteract the tendency to a too largely literary training, naturally inherent in all school education. . . . There is a dearth of motor activity in school work, and modern education seeks by various devices to overcome this one-sidedness."

In October and November, 1895, an exhibit of manual training contributed by the public schools of the city of Boston formed part of a public industrial exhibition in that city. From the Kindergarten came samples of clay modelling, drawing, paper-folding, pasting, weaving, sewing, and "nature work."\* The manual training in the primary grades was on similar lines, but with more clay work. In the decorative work "the designs were many of them large, free, and strong. They were made upon plaques or tiles of clay, and consisted for the most part of leaves, flowers, or fruits, usually in relief, but sometimes depressed." Amongst other primary grade exhibits were designs in stick-laying (with drawings based upon them); designs in coloured paper (also used as motives in drawing); paper-cutting and drawing applied to the construction of type solids, cones, cylinders, prisms, etc. The grammar grades (IV. to IX.) contributed clay-modelling, colour work, specimens of pasteboard construction, mechanical drawings, wood work, sewing. The table of subjects and exercises and the number of hours per week assigned to each in the first three grades of the **Boston schools** (revised course of study adopted 1899) will show the amount of attention given to the physical training and manual development of little children in that city, which was for so long the centre of the highest learning and of the great educational developments in America:

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\*"The drawings," said the superintendent in his report for the year 1896, "were indeed crude, but they were significant: they indicated powers of observation and imagination quite in advance of the power of expression; in other words, they indicated that the children had already reached the stage when formal instruction in drawing could begin. The exhibit also illustrated what visitors to the American educational exhibit at Paris or Manchester will have observed, namely, the large gifts, wool-work on simple wooden frames rather than the fine paper weaving, exercises in threading stout coloured cords, as preparatory to the kindergarten sewing, as exemplifying the tendency to begin with the large and the relatively easy. (It is quite common for children to do their first writing on the wall-slate for a similar reason). The 'nature work' shown at Boston consisted of an abundance of natural objects from gardens, fields, and woods, which the children, after observing and naming, had been taught to use in various ways, *e.g.*, making chains of acorns, berries, shells, rose-hips, bits of straw; designs of pressed and dried clover, maple, oak, or sumac leaves; dolls made of chesnuts or acorns; boats of half acorn shells, with masts of wooden toothpicks and sails of paper; baskets, tea-sets, vases, cradles, and other toys made of natural objects, etc., etc."

	Grade I.	Grade II.	Grade III.
Opening Exercises - - - -	1	1	1
Recesses - - -	2½	2½	2½
Physical Training - - - -	1	1½	1½
Music - - - -	1	1	1
Drawing - - - -	1½	2½	2½
Reading - - - -	10	8½	8½
Oral exercises in Language - - -	1½	1½	1½
Written Exercises in Language - -	1½	1½	1½
Word Study - - - -	2	1½	1½
Arithmetic - - - -	2½	3½	3½
Occupations and Desk Work - -	—	—	—

What is meant by the first three of the above items is explained in Chapters X. and XV. of "Moral Education, etc." The last item to which no time is definitely allotted consists of practical manual exercises, writing, figuring, cutting out, pasting, designing, based upon the oral lessons and regarded as their natural counterpart. The times assigned above to reading, language, and arithmetic are, therefore, more of the nature of a teacher's time-table; and the hours quoted should be regarded as divided between different sections of the grade, the section (or sections) not engaged with the teacher being engaged in occupations and desk work often spoken of as "busy-work."\* The direct manual training in these grades is included under drawing. For Grades I. and II. the courses are as follows, the only differences being in form study and colour study, with the exception of one item of nature study (printed in square brackets), which is additional for the second grade:—

## DRAWING.

## GRADE I.

## 1½ Hours a Week.

1. FORM STUDY. (a) Sphere, cube, cylinder; square prism, right-angled triangular prism. (b) Objects like these types.
2. NATURE STUDY. (a) Natural phenomena. (b) Plants (c) Birds and other animals. [(d) Study of pose.]
3. COLOUR STUDY. (a) Choice and relations of colours. (b) Their recognition and names. (c) Ideal unit. (d) Six leading colours. (e) Making Borders, etc., in one tone.

\* For a full description of this practice see the writer's Gilchrist report on *Individuality in American Education*, pp. 37-55.



4. **APPEARANCES.** (a) Representations of type-forms and of objects like them. (b) Illustrations of simple stories.

5. **ARRANGEMENTS.** (a) Geometric figures. (b) Simple historic ornament. (c) Borders. (d) Original arrangements. (e) Space-filling.

6. **FACTS.** (a) Study of wholes and of parts. (b) Terms of location, position, direction, and relation. (c) Patterns of surfaces.

7. **MANUAL TRAINING.** (a) Modelling. (b) Paper folding. (c) Table and stick-laying. (d) Paper cutting and pasting. (e) Making in paper.

8. **CORRELATION.** (a) Language expression. (b) Imaginative work. (c) Number. (d) Elementary geography.

9. **STUDY OF PICTURES.**

The form study for Grade II. is (a) Ellipsoid, ovoid; equilateral triangular prism; cone, pyramid, vase-forms. (b) Objects like these types. The colour study; (a) Tones, tints. (b) Six leading colours and their tints. (c) Borders, rosettes, etc., in two tones.

For the third grade the course consists of three parts: representation, decoration, and construction. Representation includes a study of simple nature objects and of type forms. Decoration includes universal elements of decorative art; quatrefoil, cross, zig-zag, and frets; use of leaves in decoration; creative effort, geometric outline, space filling, plaids, mosaic units; colour study; expression in outline, light and shade, and colour. Construction includes the following items:

1. **MODELS AND OBJECTS.** Cube, cylinder, prisms, boxes, etc.

2. **PATTERNS AND DEVELOPMENTS.** Patterns of rectangular models and objects.

3. **WORKING DRAWINGS.** Figured patterns.

4. **EXPRESSION.** (a) Full, light, and dimension lines. (b) Drawing, free-hand.

5. **CONSTRUCTIVE DESIGN.** (a) Rectangular objects. (b) Pleasing proportion.

6. **MANUAL TRAINING.** Making in paper or in light cardboard.

7. **CORRELATION EXERCISES.**

8. **STUDY OF PICTURES.**

In Boston the grammar grades begin with the fourth, and as in the case of some other cities in Massachusetts, extend to the ninth. In these grades the work previously described as drawing is continued for one and a-half hours weekly, and manual training is added, occupying two hours weekly, though it still appears also in such forms as "making in light cardboard, in heavy cardboard or light wood," "special examples in wood." Manual training is looked upon as intimately related to the study of science. Indeed, the Paris exhibit contained a representation of Boston boys in the manual training room, making their own apparatus for use in the physics laboratory; carrying out the thought of Mr. T. P. Dunn's paper read before a conference of science teachers in London (January 10th, 1901), met to consider the teaching of science in board schools. Mr. Dunn took for his subject, "The co-ordination of workshop and laboratory instruction."\*

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\* "The science teacher would, he ventured to suggest, find it useful to enter into a close alliance with his colleague in the workshop. Constructing

For Grades IV., V., VI., the manual training course in the Boston schools is light tool-work and clay-modelling; for Grades VII., VIII., IX., wood-work and clay-modelling.

**Brooklyn** arranges the constructive work done in its schools under the general title, "Form and Drawing." The first grade work is purely a kindergarten continuation course; study of the sphere, cube, cylinder, and common objects resembling them; modelling these forms and objects; representing on blackboard and on paper the appearance, facts, and details of the foregoing forms; building with the type solids; using sticks and tablets to represent common objects and to work out designs for borders and rosettes; folding and cutting paper; cutting and pasting paper to represent designs and objects. (In colour the first year's work consists of recognising, naming, and using in design, normal yellow, orange, and red.) In the second year the hemisphere, square prism, and right-angled triangular prism, and other forms are similarly treated; in the third year, the cone, square pyramid, and a vase form. In the latter half of the third and the fourth years the same quasi-geometrical course is extended, and divided into the three branches, construction, representation, decoration:—

(1) Construction:—Studying the views of the sphere, the hemisphere, and the cube, and of combinations thereof. Studying the pattern of the cube. Representing the pattern of the cube and views of the type solids and combinations thereof, with tablets and by drawing. Cutting and making objects from patterns developed and drawn by the pupils. (2) Representation:—Drawing from the object the appearance of the type solids and of common objects that resemble them. Drawing fruits, vegetables, and leaves, from nature. (3) Decoration:—Making designs for borders with sticks and tablets. Studying simple historical forms, as the quatre-foil, crosses, etc., and reproducing them by drawing, by modelling, or in coloured paper.

In **Cleveland**, manual training and drawing occupy on an average something over two hours a week; this is in addition to two and a-half hours weekly of physical culture and recess. The manual work in the first four grades is mostly with clay, paper and cardboard; in the fifth grade the knife is introduced in conjunction with pencil, rule, compasses, and try square, the material being

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his apparatus piece by piece, guided by his own carefully prepared drawings, the boy was led to realise with distinctness each stage in the process, which before he realised imperfectly or not at all."

One may not pause here to indicate the possible value in the after industrial life of pupils who have acquired the constructive or developmental habit of mind side by side with the analytic. Putting together according to plan, the power of proceeding from parts to the whole, is as valuable to the learner as unpiecing methods which proceed from wholes to parts.

thin wood; the same tools are used in the sixth grade, but with thick wood as the material, simple useful objects being selected. knife-work and bench-work are alternatives in the seventh grade, bench-work being required in the eighth. The course drawn up by Dr. W. N. Hailmann for the schools of **Dayton, Ohio**, is presented in an appendix (Appendix B.); and with it a course in construction for primary grades, and a general summary of industrial work as related to other parts of the school course, which are in use in **Minneapolis**. From no quarter is stronger testimony forthcoming as to the beneficial effects of manual occupations as part of the school course than from the city last named. The regular teachers have felt the benefit of it throughout the whole of the work of the grades. Boys of well-to-do parents as well as those from poorer homes profit by the new interest and enter into their other lessons with renewed vigour. It is found to be one of the best correctives of indolence, and hereby becomes indirectly a valuable part of the school preparation for an industrial career. On the same morning that the writer was visiting the offices of the Board of Education in May, 1900, the supervisor of manual training had received a letter from a committee of nine boys representing one of the classes in a public elementary school. (It should be stated that owing to a change in the State law making the taxes payable in two instalments instead of at a single payment, the Board of Education, which had been spending money in advance, found itself suddenly in difficulties; they shortened one school year and effected other economies, amongst them being the holding of the manual training work in abeyance.) The letter, dated from one of the schools, ran somewhat as follows: "The children of our room are doing industrial work, and the ones who have the best things and don't waste wood are in a club." The purpose of the letter was to ask for material. It concluded: "We will be very glad to have you come up at any time and help us with our work.—Yours respectfully, Franklin Industrial Club." Signed by the president, secretary, and committee.

A school in **Indianapolis** was found to have hit upon a scheme for making the most of restricted opportunities. The head-master had selected eight boys to go to the central schools twice a week to take lessons in manual training. Each of these eight boys takes pupils in his own school for one period a week, and thus there are thirty-two in the school who are learning manual work by means of the central school and the one bench on their own premises.

In mixed populations the industrial work is found to make the poorer people feel that the schools are for them. At **Brookline, Massachusetts**—a suburb of Boston, spoken of as the wealthiest township per head of population in the world—the superintendent has arranged for more manual training to be given in the poorer districts—four hours weekly as compared with two hours in the other schools. The director of the work in **Newark (N.J.)** writes:—"Many of our pupils are specially interested in their manual train

ing, and are doing extra work at home. To encourage these children, we ought to have a Saturday class, held at some school centrally located and in charge of one or more of our regular manual training teachers."

Altogether independently of what happens in the schools, the whole tendency of things is to make the American child very much alive—alive, too, in the sense in which the adult understands life. The American child very early has (or, at any rate, expresses) opinions of his own. He wants to say things, and to do things. Self-expression is a second nature in his case. Amongst other things, therefore, it comes readily to him to give out his knowledge much in the same way that the man of affairs does in his larger world of interests and activities. In so far as this instinct is *rightly* handled,\* however, the educators of the American child are doing much to organise him into a versatile, capable, industrial unit. Ingenuity is more or less encouraged in him from the kindergarten upwards.

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\* By this expression the writer wishes to convey a suggestion of the necessity, which is very marked in the case of the American child, of steady-ing rather than quickening the pulse, and also to imply that natural forms of hand training may help to accomplish this. Rightly directed manual training will, as a clever coloured teacher said of the right kind of kindergarten, "stimulate your little sponge, and repress your little bombshell." In a report on the educational value of manual training, read by Dr. Harris before the National Council of Education, the possibility of possessing the child too early with instincts belonging to a more mature age was shown at some length. "At too early an age the pupil, with his small hands and fingers, his short and undeveloped arms, is obliged to acquire bad habits of holding the implements of labour, just as a child that commences holding a pen too early will not hold it so as to secure freedom of movement. Moreover, the serious occupations of life cannot be imposed on children without dwarfing their human nature, physically, intellectually and morally, and producing arrested development. Not only the games of youth, but the youth's freedom from the cares of mature life, should be insured to him if the best preparation is to be made for manhood. It is sad to know that very many children are dwarfed by family necessity, which compels them to bear the weights and cares of mature years. The street gamin in the city is preternaturally acute, but is not in process of growth towards ideal manhood. Later on he will be found suffering from premature old age. Students of anthropology tell us that man surpasses the animals so much in his mature life because he has a so much longer period of helpless infancy. . . . In fact, this scientific doctrine has already been anticipated by the humane Christian sentiment which has founded public schools; for there is a conviction deep seated in the minds of the people that all children ought to be educated together in the humane studies that lie at the basis of liberal culture. Just for the very reason that the majority have before them a life of drudgery, the period of childhood, in which the child has not yet become of much pecuniary value for industry, shall be carefully devoted to spiritual growth, to training the intellect and will, and to building the basis for a larger humanity. Such a provision commends itself as an attempt to compensate in a degree for the inequalities of fortune and birth. Society shall see to it that the child who cannot choose the family in which he shall be born shall have given him the best possible heritage that fortune could bring him, namely, an education that awakens him to the consciousness of the higher self that exists dormant in him. The common school shall teach him how to conquer fortune by industry and good habits, and the application of the tools of thought. . . . Your committee would at this point

Is it not true, as one has said, that "improvement of the faculties depends not so much upon the passive reception of knowledge as upon its after exercise"? We have in the British child raw material second to none in the world. Comparing the trend and spirit of the education given in the two countries, one only wonders whether in the matter of elasticity and adaptability which education can do so much to impart there is not something more than a possibility that under the conditions of ever-increasing mobility which characterise modern trade, the rising generation in England may be left behind by its contemporaries on the great Western Continent. In industry, also, one of the crucial questions in all consideration of national progress seems to be, Is the worker to dominate the machinery, or the machinery to dominate the worker? Whichever of the two is the more versatile and capable of adjustment to new needs will triumph. Of the adjustability of machinery the vast number of new inventions year by year is evidence. As to the final adjustability of the man, his education must in the long run be sponsor. No nation is yet "out of the wood" in this respect; perhaps America—*par excellence*, the land of inventions—least of all. One sentence from Mr. Vice-Consul Erskine's report on "Education in Chicago" is sufficient proof of this: "A man's working life in Chicago is short, and he wishes to make all he can while he is at his best, and it is said that the average age of the workmen in one of the big engineering plants is only thirty-two, and that there are few men of forty-five who have not lost their speed, accuracy, or sight, to some extent, and that it does not pay a manufacturer to keep a man working an expensive machine—many costing £2,000—if he is only getting 90 per cent. of its capacity out of it."\* Another thing should, perhaps, be noted here, as it suggests one aspect of the general relation which subsists between education in the fullest sense and industrial or commercial conditions. The American habit of hurry for its own sake is one which observers have often commented on. Max O'Rell says that if he had his choice of sex and nationality he would desire to be an American woman; he does not say this of the American man. "There is no doubt about our being nervous," said a prominent Chicago educator. Some of this nervousness comes from the mere fashion of being always on the strain. American life is exciting; and American educators need to infuse all the pulse-steadying influences they can command into the schools. One is often impressed in America with an intellectual activity and inquisitiveness, a restless individuality, which was one of the

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call attention to the fatal omission on the part of the economist to see what is implied in his statement, that the schools should fit the child for his future duties in life. For when we inquire, we discover at once that the trade or vocation in life is but a small part of the total functions of anyone's life. It is what goes with the trade or vocation that makes even it a success or failure."

\* Diplomatic and Consular Reports; Miscellaneous Series, No. 554: "Education in Chicago." Foreign Office, 2½d. See also pages 200, 208.



characteristics of Athenian society in ancient times. There seems to be some need of the *omnia æquo animo* of the ancient Roman. It cannot be a good sign industrially that the passion for work has become a wearing excitement, even an affectation. In a little book, "America and the Americans—from a French point of view,"\* the writer says: "In England polite snobbery dictates the question, 'How are you amusing yourself?' In America polite snobbery dictates the question, 'What are you doing?' Everybody is, out of politeness, supposed to be over head and ears busy. Busy in trade, busy in his profession, busy socially!" Yet this writer said that he could get through the same amount of business in far less time in London than it took in New York.

### *Industrial Art in the Schools.*

As to school studies not distinctively called manual training, yet with an undoubted bearing upon industry, drawing, as has been seen, stands out with considerable prominence in many of the American school programmes; and, however much the courses in drawing have become overlaid with the spontaneous art feeling of recent years, the first adoption of drawing into the schools of America was in view of industrial necessities. The value of drawing in industrial art was emphasised in the report of a small committee on Pedagogics, read by Commissioner W. T. Harris before the National Council of Education, in July, 1889, on the educational value of manual training:—

"Your committee would further suggest that no justice as yet has been done by the advocates of manual training to the claims of industrial drawing as a training for the hand and eye and the æsthetic sense. If the pupil pursues this study by the analysis of the historical forms of ornament, and acquires familiarity with graceful outlines and a genuine taste for the creation of beautiful and tasteful forms, he has done more towards satisfying the economic problem of industry than he could do by much mechanical skill. The great problem in the industry of nations has come to be the æsthetic one—how to give attractive and tasteful forms to productions so as to gain and hold the markets of the world. The object of the study of drawing in our schools is not the acquirement of a 'new art of expression,' to use the stale definition put forward by some of the advocates of the self-styled 'new education,' because it is not worth the pains to learn the art of drawing merely to make pictures of what is seen or what is fancied. Rather is drawing the best means of acquiring familiarity with the conventional forms of beauty in ornament—forms that express the outlines of freedom and gracefulness and charm all peoples, even those who have not the skill to produce such forms. Some nations, like the French, for example, have educated their working classes for many generations in this matter of taste, and it has become a second nature. Other nations, the Anglo-Saxon among them, are not naturally gifted with a taste for the production of the beautiful, but rather with a tendency to look for the dynamic, the lines of force rather than of freedom. They are content to

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\* Anonymous, and veiling its criticisms under a guise of humour:  
Heinemann and Co.



produce what is strong and durable and useful. But this has led them to the discovery that they must also be content with inferior places in international expositions, and with a virtual exclusion from the markets of the world. Only a high tariff can force any considerable consumption of useful articles of clumsy and unsightly shapes.

"In view of these facts, your committee have deemed it desirable to mention industrial drawing and the true method of teaching it by the analysis and production of the standard ideals in ornament, as worthy of most careful consideration on the part of all, and especially on the part of all interested in manual-training instruction, either for its economical or its educative advantages."

4. This opinion is confirmed in a preliminary report of a committee of the Society for the Promotion of Engineering Education, presented in July, 1900\* :—

"America is far behind Europe, and particularly France, in all matters pertaining to either fine or industrial art. The highest industrial rewards come for new labour-saving devices and for new art-industrial designs. In the former we already lead the world, but in the latter we are far behind. Art can only thrive under conditions of general comprehension and appreciation. We need an art atmosphere. This requires time in which to educate the whole people along these lines, and to effect this the work must be done in the public schools."

Generally speaking, one may endorse the description of the present phase of the industrial education movement in America given in the monograph on "Art and Industrial Education" prepared for the Paris Exhibition :

"The industrial education movement is far more wide-embracing in its scope than would be implied by the present prominence of the manual training school feature ; it includes the girls, as well as the boys ; it considers the needs of children in the remote country schools, no less than the wants of those in the crowded cities ; it is busy with the problem of a logical system of training, beginning with the kindergarten and ending only with the high schools. It is a vital movement full of interest and of enthusiasm, and has drawn to its support wide-awake educators all over the land."†

### *The University Elementary School, Chicago.*

This section would hardly be complete without a somewhat

\* *American Industrial Education : What Shall it Be ?* Reprinted from the Annual Volume of the Society's Proceedings, p. 9.

† Mr. Vice Consul Erskine makes reference also to the industrial values of nature study (*Education in Chicago*, p. 7). After giving an outline of the course followed in the Chicago public elementary schools, he says:—

"These studies in Nature are found to be of great use to the children, making them observe the common things around them with intelligence and giving them instruction about many things that working people have to do with in the course of their labours, and enabling them to bring these theories into practical use. This education turns out the boys into the world with a wonderful self-reliance and capacity for seizing their opportunities, and even if their spelling and punctuation leaves much to be desired they do their work to the satisfaction of their employers, many of them rise rapidly and at early ages are at the heads of departments, a position that in a European country would take years of faithful work to attain."

detailed reference to the forms of social and industrial work which gave a unique interest to the University Elementary School, Chicago. (The industrial "group work" of the children in the practising and model school of the Chicago Normal School the writer has described in Chapter IV. of his previous report.) The curriculum of the University Elementary School is specially interesting and valuable for its correlation of shop, textile, and art work with social and historical studies; and also because its chief aim is "the development of subject-matter which other schools, under different conditions, may use. . . . It is to general education what a laboratory is to business enterprises, or a nursery to a farm." It is Prof. Dewey's opinion that there ought to be a number of such schools in different parts of the country and for different social classes. The children attending the Chicago school belong largely to the professional classes. Dr. Dewey would like to reach the poor; but in their schools he would give more book work, inasmuch as such children have to draw largely on books for a helpful environment. Already, the prominence here given to manual work throughout all the grades, and the interesting character of the textile work (see Appendix C), are making their influence felt. What follows is taken from the course of study adopted in June, 1899, and shows in some detail the kind of setting which is given in this remarkable experimental school to shop-work, work in textiles, and art work. Obviously, the science work of the sixth year, if not some of the history, shows a straining after an elaborate curriculum, rather than something which is seriously attainable. But the courage of the endeavour, the striking art methods, and the studies of primitive industries make the school eminently noteworthy:

"When the natural forms of experience are carried over in the school-room, it is found that the problem of 'correlation' largely solves itself—it disappears. The bonds that tie various studies and truths together are the same that hold together the various occupations in which the child engages and the various surroundings with which he comes in contact outside the school.

"More particularly, the various forms of constructive work, in kitchen and shop, afford natural modes of experience, and give rise to problems that can be pursued in more technical and formal fashion in other classes. At the same time, they afford abundant and continued opportunities for applying whatever skill, practical or intellectual, is elsewhere gained. They introduce the children to materials, to tools, to processes and modes of handling materials which connect naturally and inevitably with arithmetic and geometry, geography, mineralogy, physics, chemistry, etc. Moreover, when interrelation is made on the basis of need and possibility of application, certain subjects naturally fall together; as, for instance, geography, with history on one side and science on the other; number with constructive activities and with science; language, both in reading, spelling, and writing, with all other subjects. Finally, art in music, line, and colour is an indispensable mode of expressing and communicating values anywhere realised in experience."

"In the organisation of the elementary school three stages, or periods, are recognised. These, however, pass into one another so gradually that the children are not made conscious of the gaps. The first extends from the age of four to eight or eight and a-half years.\* In this period the connection with the home and neighbourhood life is, of course, especially intimate. The children are largely occupied with direct social and outgoing modes of action, with doing and telling. There is relatively little attempt made at intellectual formulation, conscious reflection, or command of technical methods. As, however, there is continual growth in the complexity of work and in the responsibilities which the children are capable of assuming, distinct problems gradually emerge in such a way that the mastery of special methods is necessary.

"Hence, in the second period (from eight to ten) emphasis is put upon securing ability to read, write, handle, number, etc., not in themselves, but as necessary helps and adjuncts in relation to the more direct modes of experience. Also in the various forms of hand work and of science, more and more conscious attention is paid to the proper *ways* of doing things, methods of reaching results, as distinct from the simple doing itself. This is the special period for securing knowledge of the rules and technique of work.

"In the third period, lasting until the thirteenth year, the skill thus acquired is utilised in application to definite problems of investigation and reflection, leading on to recognition of the significance and necessity of generalisations. When this latter point is reached, the period of distinctly secondary education may be said to have begun. This third period is also that of the distinctive differentiation of the various lines of work, history and science, the various forms of science, etc., from one another. So far as the methods and tools employed in each have been mastered, so far the child is able to take up and pursue each by itself, making it, in some sense, really a study. If the first period has given the child a common and varied background, if the second has introduced him to control of reading, writing, numbering, manipulating materials, etc., as instruments of inquiry, he is now ready for a certain amount of specialisation without danger of isolation or artificiality."

What is done in the first three years is shown in Chapter VI. of the report on "Moral Education in American Schools,"

#### FOURTH YEAR (AGE 9), CORRELATION WITH HISTORY.

*American History and Geography.*—Connection is made with the discoveries and explorations studied in the previous year, but the main emphasis is laid upon colonial life considered as an adaptation of already formed social habits and technical resources to new natural conditions. A series of typical colonial settlements is studied, Mississippi Valley and Chicago from early French explorers down to about 1660; the New England Puritans, the New York Dutch and Virginian cavaliers to about 1775.

*Science and Geography.*—Studied in connection with the history work. The environment of each colony considered physiographically, including plants and animals, in so far as these factors determined the position of the colony, occupations and resources. The general physical geography, geology, and climatic conditions of the Great Lakes and the Mississippi Valley, serves as a basis for the physiography of the Atlantic coast colonies. Their experimental work in this year is based upon simple industries of

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\* This year the school (through the generosity of some of its friends) has children of four and five years of age, for the first time; consequently the sub-primary work is not as yet sufficiently formulated to be included in this report.

pioneer times, and such general problems as relation of plants to soil, and animals to plants.

*Number.*—The work of the year before carried on in the same way, but further division and ratio introduced in connection with map-drawing. Surface measurements of parallelograms and triangles; school accounts.

*Reading and Writing.*—Reference reading in "Colonial Children," Mara Pratt; "Colonial Pioneers," Parton; "Story of the Thirteen Colonies," by Guerber and others; "Elements of Physical Geography," Tarr. Special emphasis placed upon acquiring facility in writing. Writing on unruled paper. Attention given to form and rapidity.

*Sewing.*—Textile work; review of wool and the like study of oak fibre; linen and woollen industries in Colonial times; methods of manufacture; study of costume in each colony. Technical work: articles for use in the house, laundry-bags, laboratory aprons, etc.

The art and shop work being as elsewhere shown.

*Art.*—Construction: ground plan and superstructure of early pioneer houses of Puritans and Dutch. Representation: buildings, figure posing, landscape. Materials: coloured chalk, charcoal, clay. Aim: visual training.

*Shop Work.*—More demand for finish in work; on the constructive side, the first principles of house construction; gable, roof, and simple problems in strength of materials (wood). The work is carried on in connection with history, upon such articles as the loom, ferry-boat, and a typical pioneer colonial house.

#### FIFTH YEAR (AGE 10), CORRELATION WITH HISTORY OR SOCIAL WORK.

*American History and Geography* (continued).—Growth of interrelations and unity among the different colonies, with consequent independence of England, and resulting social and political development, up to 1830.

*Science.*—In connection with the industrial growth, the beginnings of metallurgy and the invention and development of some typical engine, etc. (as shown in earlier report).

*Geography.*—General physical geography of North America. Simple mathematical geography of the globe, reviewing globe geography given in the fifth year, bringing out again the causes of the seasons, zones, ocean and air-currents, etc. The physical geography of each colony is worked out in more detail this year, in connection with the study of the beginnings of the typical industries of each colony, such as the development of the mineral resources of Pennsylvania.

*Number.*—[See earlier report.]

*Reading and Writing.*—A larger amount of reference reading in history: such books as "United States History," Higginson; "From Colony to Commonwealth," Moore; "The American Colonies," Thwaite; "Boys of '76," Coffin; "Braddock's Defeat," Parkman; "Heroes of the Revolution," Parton; "Conspiracy of Pontiac," Parkman. In science: the use of simple text-books in physics and chemistry, and encyclopædias as sources of information needed. The amount of time given to writing in both history and science is increased during this year.

*Art Work.*—Representation: figure posing, architectural drawing, and landscape. Attention will be drawn to the fact that there are certain principles in colour and optics. Materials: black and white will be used, so that the pupils may begin to realise form in light and shade apart from colour. Aim: technical skill and visual training.

*Shop Work.*—Increased emphasis upon the technical side and finish of all work, and upon mechanical principles as brought out in putting machines

together ; casting in lead simple parts of machine models (simple form of steam engine).

*Sewing.*—Textile work : study of cotton after the early development of the cotton industry ; invention of the cotton gin. Technical work : completion of the sewing outfit ; general subject of repairing clothes.

*Cooking and Music.*

#### SIXTH YEAR (AGE 11), HISTORY OR SOCIAL WORK.

*Modern European History Involved in the American History Studied in the two previous Years.*—Industrial, technical, social, religious, and political causes bringing about the early discoveries and later emigrations and settlements. Spain, England, France, and Holland taken up in their relations to the new world.

*Science.*—A review of the nebular theory, and a general summing up of the physical changes concerned in the cooling of the earth and formation of rock leads up to the general problem of the formation of sedimentary rock or secondary rocks, and the relation of the geological past to the present. This brings out on the social side the location of the main agricultural products in relation to soil and climate, and the distribution of the mineral resources of the United States. On the biological side the historical development of plants and animals is brought out very generally by the study of existing types. Sources and uses of electricity studied in some of the simpler applications, such as electric bells, telephone, or telegraph.

*Geography.*—In addition to the physical geography necessitated by the science work, the transportation of the various products studied, brings in the general transportation routes of America and, to some extent, through American exports, those of the world.

*Number.*—Constructive geometry formulated in connection with its application in making scientific apparatus and shop work ; manipulation of fractions ; that is, reduction, addition, subtraction, multiplication, and division of fractions.

*Reading and Writing.*—Use for reference reading such books as, in history : "Story of the Greeks," Guerber ; translation of the "Iliad" and "Odyssey," Plutarch's "Lives" ; in science : Scott's "Geology" ; Shaler's "Geology for Beginners." Writing of records of work and of reports for school paper.

The reading prepares the way for the history work of the next two years, the elements of Greek and Roman history.

*Art.*—Representation : variety of objects connected with other work : illustration and representation combined. Materials : charcoal, monochrome, clay ; occasional use of colour for variety. Aim : technical skill, bringing out proportion, composition, light, and shadow ; visual training.

*Shop Work.*—Review of main principles in construction of dwellings. Scientific apparatus and a few simple musical instruments. Material and tools include all given in previous years ; all joints previously mentioned, with the addition of simple dovetail, mortise, and tenon joints.

*Sewing.*—Textile work ; further development of textile industry, bringing in the development and formation of trading companies ; review of flax, taking up the manufacture of damask in Holland, France, and Ireland. Technical work—girls : laundry work and mending of table linen, drafting and making of dolls' outfit ; boys : weaving baskets, spinning yarn, weaving cloth, and caning chairs.

#### SEVENTH YEAR (AGE 12), HISTORY OR SOCIAL WORK.

*Greek History and Geography.*—Studied in relation to the Orient and to Rome. Special conscious attention to art and literature.

*Science.*—Continuation in a more specialised way of animal and plant physiology, working out in some simple ways the relation of the lower forms to light, heat, and electricity. In connection with sensory and



motor tests made in the school, some work will be done in the physical analysis of sense-perception.

Continuation of study of the sources and uses of electricity. A beginning of photography will be made in the study of chemistry and physics.

*Geography.*—The Mediterranean basin of Europe, Asia, and Africa, in connection with Greek history. Working out of the geography of Illinois, of neighbouring states, in connection with their work on geological formations studied in the year preceding.

*Number.*—Social arithmetic, such as taxes and banking; weights and measures and development of the calendar in connection with Roman history. Ratio and proportion formulated; emphasis placed on the convenience of geometrical and trigonometrical methods used in working out constructive work, also involving formulation of angular measurement in connection with problems in physics.

*Reading and Writing.*—Macaulay's "Lays of Ancient Rome"; "Studies in Greek and Roman History," by Sheldon; "Roman Antiquities," Wilkins; Plutarch's "Lives."

*Art.*—Representation: architecture, figure, and landscape. Materials: charcoal, pencil, water colour, pen and ink, and clay. Aim: development of the æsthetic sense. Technique: composition, drawing of line, mass, study of values.

*Shop Work.*—Mechanical drawing for constructive work; simple mechanics; construction of electrical apparatus.

*Sewing.*—Textile work: textile industry in Greece, working out the furnishings of the Greek house, Greek dress, decorative designs, and tapestry. Technical work—girls: drafting and making of underwear.

#### EIGHTH YEAR (AGE 13), HISTORY OR SOCIAL WORK.

*Roman History and Geography.*—In relation to Greece and the Orient on one side, and to Continental Europe on the other. Special attention to origin of governmental and administrative machinery and ideals.

*Science.*—Continuation of work in animal and plant physiology, along the line of adaptation of special sense organs, with a review of the previous work on the senses, and of the simple forms of the same organs in the lower animals; continuation of study of applications of electricity, introducing simple methods of measurement; continued work on photography, the general laws of light, as applied in the camera.

*Geography.*—Continuation of the study of the physical geography of Europe, Asia, and Africa, following the growth of the Roman Empire, and its relations to the political history of Rome, but more on the political side. Working out of the sand dunes as a typical study of physical conditions.

*Number.*—Working out of electrical units in problems arising from the science work. Statement in geometrical and trigonometrical form of problems arising in the shop and laboratory.

*Art Work.*—Construction: Roman architecture, history of the arts as a principle of construction. Representation: careful study of figure. Materials: by this time there should be sufficient freedom in the handling of materials to enable the pupil to exercise a choice.

*Shop Work.*—Work not formulated.

*Sewing.*—Textile work: further development of textile industries in Rome as an illustration of her commercial dependence upon the colonies. Technical work: girls' work—drafting and making of shirt-waist and summer dress.\*

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\* For Dr. Dewey's own account of the aims and underlying principles of the school see his book, "The School and Society." (P. S. King and Son.) Adding *Cooking* and *Music* throughout, the entire courses are given above.



**(II.) INDUSTRIAL TRAINING IN THE PUBLIC HIGH SCHOOLS.**

The public high schools correspond in some respects to the English higher grade schools. The average ages of the pupils are from fourteen to eighteen for the successive four years of the course. The schools are as much a part of the city systems as the public elementary schools, and they are absolutely free. Manual training is almost a matter of course in such schools, at least, as an optional subject. The report of the Committee of Fifteen, presented in 1895, said :—

“ Manual training, so far as the theory and use of the tools for working in wood and iron are concerned, has just claims on the **elementary school** for a reason similar to that which admits natural science. From science have proceeded useful inventions for the aid of all manner of manufactures and transportation. The child of to-day lives in a world where machinery is constantly at his hand. A course of training in wood and iron work, together with experimental knowledge of physics or natural philosophy,\* makes it easy for him to learn the management of such machines. . . . One half-day in each week for one half-year each in the seventh and eighth grades will suffice. . . . It should be mentioned, however, that the advocates of manual training in iron and wood work recommend these branches for **secondary schools**, because of the greater maturity of body, and the less likelihood to acquire wrong habits of manipulation, in the third period of four years of school.

Out of ninety-four replies received by the superintendent of schools (Milwaukee, Wis.) to a circular letter issued September, 1898, eleven reported manual training in the high schools only (amongst them Providence, Cambridge, St. Louis, Louisville, Albany, Omaha); twenty-eight in the high schools and some of the grades; five in the high schools and all the grades (Boston, Camden (N.J.), Cleveland, Denver, Washington—but see page 106 of this report).

Industrial training in the public high schools falls into a three-fold division, according to the name and nature of the schools themselves. We have to consider (1) the technical and commercial courses offered in the ordinary high schools; (2) the manual training high schools; (3) the commercial high schools.

**(1) *Industrial Training in the ordinary High Schools.***

The business course in the **Cleveland** high schools includes in the first year five hours a week for book-keeping and commercial correspondence; in the second year three hours a week for book-keeping and commercial law; in the third year five hours a week for physics, with five hours for either trigonometry or botany in the second half of the year; in the fourth year four hours each for civics and political economy, history, chemistry, or physiology, and astronomy or arithmetic; English or German and mathematics in all years. (“Hours”=recitations or lessons.) To show

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\* Such experimental knowledge is, however, almost entirely confined to the high school. The curriculum of the schools in a city in Massachusetts shows experimental physics in the 9th grade, but no manual training other than drawing. (*Moral Education, etc.* Chapter XIII.)

the standard attained, the instructor in civics and economics at the Central High School gave the writer the following test-paper set to the senior class, with the remark that the subject is not taken in the high school as part of the collegiate preparatory course, but is taken by those not going to college, the theory being that the high school is the poor man's college (not, of course, meaning the very poor);\* civics is taken from September to January, economics from January to June:—

CENTRAL HIGH SCHOOL, CLEVELAND, OHIO.

SEPTEMBER—JANUARY. JANUARY—JUNE.

*Senior Civics and Economy. June 1899.*

(Omit VII. or VIII. ; IX. or X. ; XI. or XII.)

1. Why ought national and municipal politics to be "divorced"? Compare, in theory and practice, the so-called committee or board plan of city government with the federal plan. What is a "machine"? What is meant by "home rule" for American cities? (12)
2. What is the unique feature of our national Supreme Court? What is the difference between a consul and an ambassador? How was the treaty of peace between the United States and Spain made? If Speaker Reed resigns, how will his place as Speaker and as a member of the House be filled? (10)
3. What is the difference between primary and representative government? Give illustrations of each. Explain why an Ohio township is, usually, a six-mile square and give also a brief account of its government. (8)
4. Explain how "ministerial responsibility" operates in England? Compare the methods of electing a French President and an Ohio Governor. Compare the centralised and decentralised types of government. (10)
5. Define social wealth, collective wealth, utility, and value. Compare the social benefits of capitalising wealth with its luxurious expenditure. Show that commerce is productive labour. (15)
6. Explain the propositions (1) "Cheap labour is dear labour"; (2) "Rent does not affect prices"; (3) "Money makes money." (10)
7. Compare the factory system of industry with the old guild or domestic system. (10)
8. Justify the principle of labour organisation. (10)
9. Point out the relation of the market and normal prices (1) of Gold or Silver, (2) of Wheat, (3) of Standard Oil. (10)
10. Give a brief summary of Henry George's theory as to rent. (10)
11. What are the evils of monopoly? Is combination ever justifiable? Distinguish between a pool and a trust. What is meant by the socialisation of monopolies? (15)
12. What is the "problem of distribution"? How does it differ from the problem of exchange? Define wages; give both subjective and objective points of view. State and criticise the wage-fund theory. (15)

(Note: those taking civics, only, will answer the first four questions; those taking Economy, only, the last eight; with choice as indicated above.)

**Boston** has, in addition to its general courses of study, a commercial course for the high schools, the first two years' curriculum having been drawn up in September, 1897, the only changes made from the ordinary courses being the substitution of phonography,

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\* With respect to civil government (and ethics as related to it), the superintendent of schools in Boston said that there were both masters and men who saw the importance of having it studied in the schools.

penmanship, and commercial forms for a foreign language (French, German, or Latin), and of book-keeping and commercial geography and arithmetic for mathematics (algebra and plane geometry). The commercial course consists of :—

**FIRST YEAR.**

ENGLISH : Four hours a week till March 1st ; one hour a week after March 1st. English Language and Literature.

HISTORY : Two hours a week. Ancient History.

PHONOGRAPHY, PENMANSHIP, AND COMMERCIAL FORMS : Either four or five hours a week.

COMMERCIAL ARITHMETIC AND BOOKKEEPING BEGUN : Either five or four hours a week till March 1st ; either four or three hours a week after March 1st.

SCIENCE : Four hours a week after March 1st. Botany.

DRAWING : Two hours a week.

MUSIC (See Note 1) : One hour a week. Singing.

PHYSICAL TRAINING : Two hours a week. Gymnastics for girls. Gymnastics and Military Drill for boys.

(NOTE 1 : Pupils excused from singing must do additional work in some other study of the course.)

**SECOND YEAR.**

ENGLISH : Three hours a week. English Language and Literature.

HISTORY : Two hours a week. Mediaeval History. Modern History begun.

PHONOGRAPHY, TYPEWRITING, AND ELEMENTS OF MERCANTILE LAW : Either three or four hours a week.

BOOKKEEPING AND COMMERCIAL GEOGRAPHY : Either four or three hours a week.

SCIENCE : Three hours a week. Zoology ; followed by a short course in Physiology and Hygiene.

DRAWING : Two hours a week.

MUSIC (See Note 1) : One hour a week. Singing.

PHYSICAL TRAINING : Two hours a week. Gymnastics for girls. Gymnastics and Military Drill for boys.

(NOTE 1 : Pupils excused from singing must do additional work in some other study of the course.)

It should be noted that book-keeping, including commercial arithmetic, was already an elective substitute for zoology in the second year.

**CAMBRIDGE ENGLISH HIGH SCHOOL.**

The commercial course adopted in May, 1899, for the Cambridge English High School is as follows :—

**COMMERCIAL COURSE.**

Subjects								Hours
	First Year.							per week.
French or German	-	-	-	-	-	-	-	5
Algebra	-	-	-	-	-	-	-	5
English History (seven months) and Physiology (three months)	-	-	-	-	-	-	-	3
English	-	-	-	-	-	-	-	3
Drawing	-	-	-	-	-	-	-	1

*Second Year.*

French or German	-	-	-	-	-	-	5
Physics, 5 ; or Geometry, 3 ; and History of Greece and Rome, 3,	5	or	6				
English	-	-	-	-	-	-	3
Book-keeping and Commercial Forms	-	-	-	-	-	-	3

*Third Year.*

Stenography and Typewriting	-	-	-	-	-	-	5
Chemistry, 3, and Botany, 2 ; or French and German	-	-	-	-	-	-	5
English	-	-	-	-	-	-	3
Geometry, or History of Greece and Rome, or of the United States, elementary	-	-	-	-	-	-	3

*Fourth Year.*

Descriptive Economics, Commercial History and Geography	-	-	-	-	-	-	5
English	-	-	-	-	-	-	5
Civics, 2, Astronomy, 2 ; or French or German	-	-	-	-	-	-	5
History of the United States, elementary, or a detailed study of a limited period	-	-	-	-	-	-	3

All courses are substantially the same for the first year, and these general statements apply to all the courses :—

- (1) All pupils will have a weekly exercise in music (choral singing).
- (2) Drawing is required of all once a week for the first year, and is open to all as an extra subject during the remaining three years.
- (3) It is expected that no two foreign languages will be begun the same year ; that any foreign language once begun will ordinarily be continued for two years, and that a modern foreign language will not be continued longer than two years, except by work in conversation.
- (4) Variations from the courses as stated are permissible with the approval of the headmaster.

One other example may be quoted showing how the ordinary public high school adapts itself to technical and commercial training. Four courses of study, each of four years, are offered, and are shown in full as typical of the way in which commercial and technical courses are co-ordinated with those of a more general character :—

#### COURSE OF STUDY IN THE B. M. C. DURFEE HIGH SCHOOL, FALL RIVER.

(1) *The General Course.*—In this course certain studies are prescribed, but the pupil may make up the remainder of the required hours from a wide range of elective studies. Pupils who do not intend to enter college, but who desire a good general education, are advised to take this course. It is also the course advised for pupils who intend to enter a State normal school or the city training school for teachers.

(2) *The College Preparatory Course.*—This designed course is especially for pupils fitting for college. It is necessarily, in many respects, a difficult course.

(3) *The Technical Course.*—This course offers a combination of the ordinary high school studies with practical work in the use of tools and machines, together with a complete course in mechanical drawing, technical drafting, and freehand drawing.

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The course is designed to provide training in the most advanced techniques of modern film production, including the use of the latest equipment and the most effective methods of directing and editing. The course is open to all who are interested in the film industry and who wish to gain a practical knowledge of the art and science of film-making.

~~SECRET~~

12. The course of study will be required of all the boys with such exceptions as may be made by the local governing pupils in this regard.
13. The course of study will be required of all pupils.
14. French, Spanish, and Italian must be begun the same year. The French and Italian of the senior year are for those who began them in the junior year.
15. The course of study may be modified by the principal subject to the approval of the Superintendent of Schools and Committee on High School.
16. Pupils intending to enter a State normal school or the city training school for teachers may pursue English reviews, as an extra, in the senior year. English reviews include one or two exercises a week in arithmetic, one in English grammar, one in geography, and one in United States history.
17. Pupils of the general course choosing Greek, mathematical reviews, book keeping, shop work, and mechanical drawing, must take them with the pupils of the college preparatory, commercial, and technical courses, respectively.
18. The right to decline to form a division in an elective or alternative study is reserved unless there be at least twenty five applicants in the first-year class, twenty in the second-year class, fifteen in the junior class, or ten in the senior class. This reservation applies also to such studies as the technical and commercial courses, mentioned elsewhere.
19. French or German is required of candidates for admission to Harvard University.
20. Experimental physics is required only of candidates for admission to Harvard College or the Lawrence Scientific School.
21. Pupils in the College Preparatory Course are allowed five years instead of four for completing the course if their parents so desire.
22. Pupils intending to pursue the literary course of some college for women must take French two years when required in preparation for admission. For such pupils classes in history of England and advanced chemistry are also required when necessary.

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... governing people in this country.

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14. Both Receipts and Expenses must be taken the same year. The Receipts and Expenses of the entire year are for those who began them in the same year.

10. The course of study may be modified by the principal subject to the approval of the Superintendent of Schools and Committee on High School.

(6) Pupils intending to enter a State normal school or the city training school for teachers may prepare English reviews, as an extra, in the senior year. English reviews include one or two exercises a week in arithmetic, one in English grammar, one in geography, and one in United States history.

(7) Pupils of the general course choosing Greek, mathematical reviews, book-keeping, shop work, and mechanical drawing, must take them with the pupils of the college preparatory, commercial, and technical courses, respectively.

(3) The right to decline to form a division in an elective or alternative study is reserved unless there be at least twenty five applicants in the first-year class, twenty in the second-year class, fifteen in the junior class, or ten in the senior class. This reservation applies also to such studies as the technical and commercial courses, mentioned elsewhere.

(ii) French or German is required of candidates for admission to Harvard University.

(10) Experimental physics is required only of candidates for admission to Harvard College or the Lawrence Scientific School.

(11) Pupils in the College Preparatory Course are allowed five years instead of four for completing the course, if their parents so desire.

(10) Pupils intending to pursue the literary course of some college for women must take French two years when required in preparation for admission. For such pupils classes in history of England and advanced literature are discontinued when necessary.

## COURSES OF STUDY (Durfee High School, Fall River).

GENERAL.		
	REQUIRED STUDIES.	ELECTIVE STUDIES.
FIRST YEAR.		
First Semester.	English. Algebra. Grecoan History and one of the following :	Latin, Physiography Drawing. Book-keeping, Shop Work and Mechanical Drawing.
Second Semester.	English. Algebra. Roman History and one of the following :	Latin continued, Physiography continued, Book-keeping continued, Shop Work and Mechanical Drawing continued.
SECOND YEAR.		
First Semester.	English. Plane Geometry. Medieval History and one of the following :	Latin continued, French, German, Physiology, Book-keeping continued, Shop Work and Mechanical Drawing continued, Greek.
Second Semester.	English. Plane Geometry. Modern History and one of the following :	Latin continued, French continued, German continued, Physiology continued, Book-keeping continued, Shop Work and Mechanical Drawing continued, Greek continued.
JUNIOR YEAR.		
First Semester.	English. Physics or Botany and two of the following :	Latin continued, French continued or begun, German continued or begun, Greek continued, Civil Government, Shop Work and Mechanical Drawing continued.
Second Semester.	English. Physics or Botany and two of the following :	Latin continued, French continued, German continued, American Political History, Shop Work and Mechanical Drawing continued, Greek continued.
SENIOR YEAR.		
First Semester.	English. Chemistry or Zoology and two of the following :	Latin continued, French continued, German continued, Math. Reviews, Astronomy, Solid Geometry, Economics, Greek, Shop Work and Mechanical Drawing continued.
Second Semester.	English. Chemistry or Zoology and two of the following :	Latin continued, French continued, German continued, Greek continued, Shop Work and Mechanical Drawing continued, Geology, Trigonometry, Psychology and Ethics, Math. Reviews continued.



## COURSES OF STUDY (Durfee High School, Fall River).

COLLEGE PREPARATORY		TECHNICAL COURSE	COMMERCIAL
FIRST YEAR	English (4) Latin (4) Algebra (5) German History (4)	English (4) Latin or Ancient History or Physiography (4) Shop Work (4) Drawing (3) Algebra (4)	English (4) Book-keeping (4) Penmanship 1st half year (4) Arithmetic 2nd half year (4) Algebra (4)
SECOND YEAR	English (3) Latin (5) Greek or German (5) Plane Geometry (4) Roman History (2)	English (4) Plane Geometry (4) Latin or French or Mod. and Med. Hist. or German (4) Shop Work (4) Drawing (4)	English (4) Book-keeping (4) Pen. 1st half year (4) Com. Geog. 2nd half year (4) Geom. or Ger. or French or Mod. and Med. Hist. (4)
THIRD YEAR	English (3) Latin (4) Greek or German (5) French (4) Historical Review (2)	English (3) French or German (5) Historical Review (2) or Civil Government and American Pol. Hist. (4) Shop Work (3) Drawing (2) <i>Pupils preparing for scientific schools must take the left hand group of studies; others should take the right hand group.</i>	English (4) Shorthand (2) Typewriting (2) Physics or German or French (4) Civil Gov. 1st half year (4) Am. Pol. Hist. 2nd half year (4)
FOURTH YEAR	English (2) Latin (7) Greek or German (5) French Physics (5) Math. Review (5)	English (4) Chemistry (4) Economics and Com. Law or Astronomy and Geology (4) Shop Work (5) Drawing (4) <i>Pupils preparing for scientific schools must take the left hand group of studies; others should take the right hand group.</i>	English or Chemistry (4) Shorthand (4) Typewriting (4) Econ. 1st half year (4) Com. Law 2nd half year (4)

(13) The time given in the technical course to shop work and mechanical drawing is at present less than the amount intended, on account of lack of room, equipment, and teaching force.

One of the notable recent events in American education is the passing of a law in the State of Massachusetts, which became operative in September, 1895, whereby all cities whose population exceeds twenty thousand are required to maintain manual training courses in connection with their high school systems. The significance of this is seen when taken side by side with the statute of 1891—the culmination of a chequered but very interesting story of high school development in this State—that *every town* must provide free high school tuition; if not in a high school of its own, then in that of another town. Twenty-three cities, with a population of 1,494,906, came under the law of 1895; and it was reported in January, 1899, that several high schools not compelled to do so by law had added manual training to their courses. In his able *apologia*, “How far the Public High School is a just charge upon the Public Treasury” (published in 1899), Dr. Frank A. Hill, the State Secretary of Education, puts forward a two-fold justification of the manual training work in the high schools. It engages the mind through the motor activities, often thereby working more closely in line with individual capacities and needs, and it has the effect of making the taxpayer more willing to pay the cost of public higher education.

As to the co-ordination of academic studies with training in the manual arts, there is an extremely valuable chapter in the volume just issued by the United States Commissioner of Education (Vol. I. of the Report for the year 1899-1900), written by Herr J. Tews, of Berlin, and translated for issue in the Report. An interesting reference is made, by way of illustration, to Denmark:—“Denmark is a country with many flourishing rural popular high schools. Sons and daughters of peasants attend them to extend and strengthen their general education.” And the opinion of one who is thoroughly acquainted with the Danish peasantry is quoted as to the excellent service rendered by these high schools, and attributing the rise of the butter trade of Denmark to the better education of the peasantry. “It cannot be said with truth that general education has only a social, and technical education only an economic value,” urges Herr Tews, as one of his general conclusions. “The practical aim of human education is expressed in the old saying, “Professional in one” (special education) and “amateur in all” (general education).” The all-round educational equipment of the man is a factor in his success as a worker. This view in no way clashes with what has been said above, with regard both to the elementary and the secondary school, in laying stress on the demand that school education shall be not merely oral or bookish with an almost one-sided emphasis on the 3 R's. Rather do the two points of view lead up to the same summary statement of the school ideal of curriculum and training as being the “3 H's,” or the training of head, hand, and heart (or character).

*(2) Manual Training High Schools.*

The developments indicated in the preceding section almost inevitably suggest the gradual establishment of special high schools for commercial and industrial training, to be given side by side with academic studies. These schools will not necessarily act as manual training 'centres' to which pupils are drafted from other schools, but will rank co-ordinately with the ordinary high schools, the only difference being a more specialised reference both in choice of staff, and to some extent in the drawing up of the curriculum, to commerce and industry.

The manual training high schools of America specially impressed Mr. J. H. Reynolds, Director of the Manchester Municipal Technical School, on the occasion of his visit to the United States in April and May, 1898. He says\* :—

"The most remarkable of the educational developments in the States, and in many respects the most fruitful, are to be found in the institutions known as manual training schools, that is to say, schools in which manual training forms an important factor in the school curriculum, and is treated as an organic part of the education given. It is doubtful whether there is in this country any such type of school, though, of course, training in the use of woodworking tools has become widely established in primary and secondary schools. These manual training schools are, in fact, English high schools, and have generally a three or four years course for boys (in some of them girls are included also).

"Some of these schools are city schools—that is to say, they are managed by the municipality, as, for example, the Mechanic Arts School of Boston; others are the outcome of private beneficence."

At present we are concerned with the public manual training high schools. A very good statement of the aim and working of such schools is furnished in a pamphlet issued in 1900 describing the **manual training high school of the Borough of Brooklyn (New York City)**.

The Manual Training High School is maintained by the Board of Education of the city of New York under the direction of the Brooklyn Borough School Board.

"It was opened as a free high school for boys on February 12th, 1894,

\* Report presented to the Manchester Technical Instruction Committee. (Blacklock and Co., Albert Square, Manchester. 6d.)

† In some of the elementary schools also girls take part of the course in woodwork.

to furnish a thorough high school education to those intending to pursue their studies further in college, and to those expecting to terminate their school career with the high school. At the same time it was designed to teach boys the application of their studies to the various occupations of life. In response to many applications, girls were admitted in February, 1896, under the same conditions as boys. The fact that the school meets a popular demand is shown by the present registry of over six hundred students, almost equally divided between the sexes.

The school offers three different programmes of studies, with possibilities of variation in each so as to meet almost any conditions that may arise. The Science Course of four years is designed to prepare for such courses in male colleges as do not require Greek for admission, also for the better technical schools, and for the study of law, medicine, or dentistry. The Science Course also prepares young men for responsible positions with architects, builders, manufacturers, and electrical engineers. The Liberal Course of four years prepares for the various courses in the female colleges not requiring Greek for admission, for the Brooklyn and Manhattan training schools for teachers, and for the State normal schools. The Business Course of three years prepares young men and women for direct entrance into commercial life.

The courses, in detail, are as follows:—

#### SCIENCE COURSE.

	<i>First Year.</i>	Periods per Week
Algebra - - - - -	- - - - -	4
Latin or German - - - - -	- - - - -	5
English - - - - -	- - - - -	3
History of Greece and Rome - - - - -	- - - - -	2
Physiology and Physics - - - - -	- - - - -	3
Vocal Music - - - - -	- - - - -	1
Drawing - - - - -	- - - - -	4
Joinery, Turning, Sheet-metal. Work, Forging, Sewing, Knife Work, Ornamental-iron Work - - - - -	- - - - -	8

#### *Second Year.*

Geometry - - - - -	- - - - -	4
Latin or German - - - - -	- - - - -	4
English - - - - -	- - - - -	3
History of Modern Europe - - - - -	- - - - -	2
Physics and Chemistry - - - - -	- - - - -	4
Vocal Music - - - - -	- - - - -	1
Drawing - - - - -	- - - - -	4
Pattern-making, Wood-carving, Sheet-metal Work, Forging, Moulding and Casting, Needlework, Household Economy, Cooking - - - - -	- - - - -	8

#### *Third Year.*

Geometry, Trigonometry, Surveying - - - - -	- - - - -	4
Latin or German - - - - -	- - - - -	3
German or French, or Botany and Geology - - - - -	- - - - -	4
Physics and Chemistry - - - - -	- - - - -	4
American History and Civics - - - - -	- - - - -	2
English - - - - -	- - - - -	3
Drawing - - - - -	- - - - -	2
Machine work, Domestic Problems - - - - -	- - - - -	8

	<i>Fourth Year.</i>	Periods per Week.
Advanced Algebra and Reviews - - - -	-	3
Latin or German - - - - -	-	3
Physiography and Zoology, or German or French - -	-	4
Mechanics and Electricity - - - - -	-	4
History and Economics - - - - -	-	2
English - - - - -	-	4
Drawing - - - - -	-	2
Applied Mechanics and Machine Construction - -	-	8

**LIBERAL COURSE.**

The first two years of the Liberal Course are the same as those of the Science Course, the third and fourth years are:—

*Third Year.*

Geometry and Trigonometry - - - -	3
Latin or German - - - - -	3
Physics and Botany - - - - -	4
American History and Civics - - - - -	2
English - - - - -	3
Drawing - - - - -	2
Machine Work, Domestic Science, Constructive Problems	8
Vocal Music - - - - -	1

*Fourth Year.*

Advanced Algebra and Reviews - - - -	3
Latin or German - - - - -	3
Physiography and Zoology - - - - -	4
History and Economics - - - - -	2
English - - - - -	4
Drawing - - - - -	2
Constructive Problems and Laboratory Practice -	8

**BUSINESS COURSE.**

The first two years of the Business Course are the same as those of the other two courses, the third year is:—

*Third Year.*

Bookkeeping and Commercial Arithmetic - - -	10
Latin or German - - - - -	3
Correspondence and Commercial Law - - -	2
English - - - - -	3
American History and Civics - - - - -	2
Commercial Geography and Economics - - -	2
Stenography and Typewriting - - - - -	5

Notes on the above:—

1. The school day is divided into six periods.
2. Pupils electing Latin and German may drop Latin and take up French during the fourth year.
3. As far as the daily programme will allow, pupils may be permitted to specialise in the last year of their course, preparatory to their proposed future.
4. During the third and fourth years individual instruction in composition and declamation is given.
5. Botany and zoology are arranged as to sequence, so that botany shall always be studied during the spring months.
6. A second language may be taken up during the last two years in the Liberal Course for four periods per week, as an option.

"While careful attention is given to several different forms of manual work, the institution is in no sense a trade school. It is in every sense a high school. The object in the manual work is not to teach a trade, but is rather to teach the fundamental principles underlying the various occupations, and to teach the practical application of the various high school studies to the more common vocations, industrial, commercial, and technical. The principle that *theory without practice is of little value* is fully recognised, and so far as possible, every principle taught in each subject is applied to work.

The school is liberally supplied with shops and laboratories. The chemical, physical, and biological laboratories are each arranged so that forty pupils can perform the same experiment at the same time. The electrical laboratory contains a large amount of apparatus for work in elementary electrical engineering, and with the three electric motors in the school gives ample opportunity for experimentation with electric lighting and power. Part of the machinery is run by a motor, built by the pupils of the school. It was designed by the class in physics, the drawings were made in the mechanical drawing class, and the patterns in the workshops. The building was wired for electric lights and for a local telephone service by the pupils, and both lights and telephones are in successful operation.

The diplomas of the Manual Training High School are accepted by the Regents for admission to schools of law, medicine, and dentistry, its graduates are accepted on certificate by the colleges in the same way as those of other high schools, and its courses have been approved by the State superintendent of public instruction for admission to the city training school for teachers, and the State normal schools.

"Although the first class was graduated only three years ago, the following occupations of a few graduates might be enumerated. Two are in the employ of the national government (one at 675 dols. and one at 1,000 dols. per year), three are in the employ of the city, one is editor of a trade journal in New York, one is associate editor of an engineering magazine, five are architectural draughtsmen, one is head draughtsman for a firm of patent attorneys, twelve occupy important positions with manufacturing concerns, ten are in brokers' offices, many are teachers, and three are in business for themselves. The foregoing are a few of many good positions occupied by graduates.

To take an example of a Western manual training high school, that of **Denver** (Col.), as shown in the very complete and well-illustrated course of study, published in 1898, exhibits similar general features: "The purpose of this school is to furnish a liberal elementary education, suitable not only for those who contemplate a higher education later, but especially for those pupils who, upon leaving school, must enter at once upon the active duties of life. The course of study gives ample preparation to meet the requirements for entrance to universities and technical schools, except to departments requiring preparation in Greek." An abridged statement of the course of study is as follows:—

#### COURSE OF STUDY.

[NOTE.—The figures after the studies indicate the number of school hours per week devoted to that subject.]

#### FIRST YEAR.

*Mathematics* (5).—Algebra and Plane Geometry.

*Science* (4).—Physical Geography until January; Botany.

*History and English* (3).—American Literature and Rhetoric until January; Greek History.



**FIRST YEAR—continued.**

*Language* (4).—Latin or German, or English.

*Drawing* (4).—Freehand (2); Mechanical (2).

*Manual Work* (10).—For Boys: Joinery, 16 weeks; wood-turning, 12 weeks; wood-carving, 10 weeks. For Girls: Plain sewing; joinery on alternate days from January to June.

*Music* (1).—Chorus singing.

*Physical Culture* (1).

**SECOND YEAR.**

*Mathematics* (4).—Algebra; Plane and Solid Geometry.

*Science* (5).—Physics with laboratory practice.

*History and English* (3).—Roman History until January; Rhetoric; English and American Literature.

*Language* (4).—Latin or English, or German.

*Drawing* (4).—Freehand (2); Mechanical (2).

*Manual Work* (10).—For Boys: Pattern-making and moulding, 20 weeks; forging, 18 weeks; lessons in brazing and soldering. For Girls: Drafting patterns; cutting and fitting undergarments; machine-sewing; wood-carving on alternate days from January to June.

*Music* (1).—Chorus singing.

*Physical Culture* (1).

**THIRD YEAR.**

*Mathematics* (4).—Algebra; Plane Trigonometry; Bookkeeping.

*Science* (7).—Chemistry with laboratory practice (5); Steam, Electricity, and Magnetism\* (2).

*History and English* (5†).—English History; English Literature; Civil Government.

*Language* (4).—Latin or English, or German; French.‡

*Drawing* (4).—Freehand (2); Mechanical (2).

*Manual Work*.—For Boys: Vice work; machine tool work; construction. For Girls: Cooking; domestic science. The manual work of this year occupies eight hours per week for sixteen weeks, and six hours per week for twenty-two weeks.

*Music* (1).—Chorus singing.

*Physical Culture* (1).

**FOURTH YEAR.**

*Mathematics* (4).—Spherical Trigonometry; Higher Algebra.

*Science* (5).—Advanced Chemistry (5), or Advanced Physics (5).

*Manual Work* (6 or more).—The student will elect advanced work in any of the lines of shop work already pursued.

*History* (4).—Study of one or more periods of American History; Political Economy.

*Language* (5).—French, or German, or English, or Latin.

*Drawing* (2 to 10).—Freehand; Mechanical; Modelling in Clay.

*Music* (1).—Chorus singing.

*Physical Culture* (1).

From the above the fourth-year student will, with the approval of the principal, choose thirty hours' work per week, at least twelve of which must be chosen from the following lines of work: Mathematics, Science, History, Language. The manual work is required of all students.

The manual training high schools of **Philadelphia** are deserving of mention, and in this same city Mr. Liberty Tadd presides

\* With the approval of the principal, shop work may be substituted.

† Three for the first four months. One of the five periods is for unprepared work.

French may be substituted for Mathematics in the third year.

over the work of the public School of Industrial Art. Dr. W. L. Sayre, Principal of the Central Manual Training (Public) High School, informed the writer that in his curriculum the time is divided equally between the manual training and the academic courses. French and German replace the Latin and Greek of the collegiate preparatory courses. Dr. Sayre regards it as the mission of his school to "give to the community a class of young men who are in direct touch with the country's greatest need—American skilled labour." Of the five hundred and more graduates of the school, the oldest of whom has scarcely reached the age of twenty-five, forty are already in positions of responsibility as superintendents, managers, foremen, members of firms, etc. In an exhibit of work at New York during the year 1895-96 this school was placed first in a list of five. In the opinion of the judges, the conclusion was irresistible that brains capable of such admirable expression in metal were under a discipline that neither college professors nor boss mechanics could ask to have improved." The great employers of labour are, however, not unanimous in regard to the influence of the manual high school training on industrial efficiency. The principal realises the ethical value of manual work, speaking on the strength of fifteen years' experience. There is, he said in conversation, an element in a boy which we often misname badness, and which he wants an outlet for. "This 'devilry' finds expression in the push of the plane and the blow of the hammer."

Other schools might be referred to,\* but the purpose of the present paper will be served by adding the details of one manual training course, namely, the **Rindge Manual Training School**, Cambridge (Mass.), as drawn up by the Board of Education ("School Committee"). This is one of the schools which definitely prepares pupils for admission to the Massachusetts Institute of Technology and the Lawrence Scientific School of Harvard University. Ten hours a week are given to drawing and shopwork, which are bracketed together throughout, (excepting in the fourth year in the case of those who are entering college, when five hours are given to manual work, and ten hours to physics).

#### DRAWING AND SHOPWORK.

##### FIRST YEAR (TENTH GRADE).

The course in mechanical drawing includes the following:—Use of T. square, triangles, scale, pencil and compass, mechanical alphabet and its applications, geometrical constructions, projections, prisms, cylinders, etc., dimensioning, intersections and developments, and tests.

The course in free-hand drawing includes drawing from ornament in the flat, elementary design and free-hand perspective from models.

The course in carpentry and joinery is as follows: Saw and chisel exercises, halved joints, blind mortise and tenon joints, open mortise and tenon joints, halved dovetailed joints, dovetailed joints, brace joints, boring exercises, dowel joints, table leg and rail, glued triangle having angles of 30, 60, and 90 degrees, model of a newel post, tool chest, shoe-blackening stand, etc.

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\* The Manual High School at Chicago and its efficiency (in spite of inadequate premises) are referred to in Mr. Vice-Consul Erskine's report on *Education in Chicago*, pp. 10-11.

The tools used are rip, cross-cut, back, and keyhole saws ; block, jack, rabbit planes and jointer ; try-square, chisels, gouges, bit stock, bits, level, marking-gauge, hammer, nail set, mallet, screw driver, counter sink, bradawl, spoke shave, clamps, wood files, drawing-knife, mitre box, oilstone, and grindstone.

#### SECOND YEAR (ELEVENTH GRADE).\*

The work in mechanical drawing includes the following :—Inking with ruling pen and compass pen, shade lines, the standard bolt with formulæ, machine drawing, dimensioning and specifying, free-hand outline drawing, mechanical perspective, free-hand perspective from models, free-hand machine drawing, dimensioned constructions, intersection and development of plane surface solids requiring cutting planes, oblique projections, and tests. All sheets are executed in ink, except those for free-hand and mechanical perspective.

The course in free-hand drawing includes drawing from ornament in the round, applied design, laying of flat colour washes with the brush, model and object drawing.

The course in wood-turning is preparatory to pattern-making, and consists of exercises in measuring with calipers and dividers, and in cylindrical, compound, conical, globe-chuck, and face-plate turning.

The tools used are :—Wood-turning lathe, inside calipers, outside calipers, dividers, gouges, chisels, cutting-off tool, round-nose and diamond-point tools, oil-stone, and oiler.

The pattern-making work consists of instruction concerning moulding, draught of patterns, use of shrink rule, core prints, and core boxes ; followed by exercises in laying out patterns, building up cone-patterns, jig-sawing, and all operations involved in making both solid and split patterns.

The course in forging and blacksmithing is as follows :—Exercises in care of fire, and in drawing, upsetting, bending, riveting, welding, punching, and tempering. Some of the articles made are :—The wedge, square point, sign dogs, stone dogs, S-hooks, bent welded rings, harness hooks, truck-hangers, hooks and staples, swivels, shafting-keys, shaft with shoulders, bent angle irons for strengthening joints, welded angle-irons, chain links, eyebolts and ring, clevice with bolt and cotter, bolts and nuts, square and hexagonal lathe tools, tempered spring, flat drill, hammer, blacksmith's tongs, etc.

The tools used are :—Portable forge, anvil, hand hammer, rule, square, swedges, fullers, set hammer, hot chisel, cold chisel, hardy, outside spring calipers, heading tools, and various tools used in caring for the forge fire.

#### THIRD YEAR (TWELFTH GRADE).

The course in mechanical drawing is as follows :—Projections : measurements of inclined lines with applications ; geometrical constructions, such as mathematical curves, the helix with applications to screws, theory of conic sections, intersection and development of solid bounded by curved surfaces requiring the cutting plane ; theory and execution of the spur gears ; machine drawing (detail and assembled) specified and dimensioned for use.

Each student is treated as an assistant draughtsman in a large office. A complete machine is selected and each assistant draughtsman is given an idea of some part which he must develop and of which he must produce a correct working drawing. At least two parts are thus treated, and each student makes two or more tracings of sheets not his own. From these he makes blue prints on paper prepared by the class. The total time in the drawing office is about seventy hours.

\* The grading is carried forward from the elementary schools and shows how clearly the idea of a well-defined "educational ladder" is kept in view. There are nine elementary grades in many Massachusetts schools.

The course in free-hand drawing includes light and shade in charcoal, drawing from the plaster cast, drawing from groups of common objects corner of room, furniture, etc., and advanced design.

The machine-shop course includes iron fitting and elementary machine-tool work. The course in iron fitting is as follows—chipping, filing, fitting of sliding parts, scraping, polishing, drilling, tapping, bolt cutting, hand turning, etc.

The tools used are scratch awl, machinist's hammer, prick-punch, centre punch, spring dividers, spring calipers, try-square, flat, cape, and round-nosed chisels, various forms and sizes of files, and the hand lathe.

The elementary machine-tool course consists of engine lathe work, including the cutting action and setting of tools, preparation of work for the lathe, straight and taper turning and boring, chuck drilling, and the use of measuring tools.

The tools used are:—Engine lathe, lathe tools, chuck drill, calipers, reference gauge, micrometer caliper, and limit gauge.

#### FOURTH YEAR (THIRTEENTH GRADE).

The mechanical drawing in the general course consists of machine mechanism, belting principles, bevel gears (elective), worm gears, rack and pinion (elective), assembling a machine from details (elective), projection and cast shadows, isometric projection and shadows, use of colour washes and tints.

The student may, if he desires, substitute the following for the drawing marked "elective":—Architectural details, as sections through a building, window casings, inside and outside finish and decorations, etc., and the plans and elevations of at least two houses.

The work for the college course is as follows:—Orthographic projections and shadows with colour washes and tints, isometric projection, simple and complicated shadows, isometric intersections, etc., and descriptive geometry.

The course in free-hand drawing includes drawing in charcoal (optional) or water colour, and advanced design.

The machine-shop course includes the use of the engine lathe fixtures (compound, back and follow rests, taper attachments, etc.), screw cutting, use of planer and shaper, milling, drilling, and boring in drill press, forming and grinding cutting tools, construction and assembling of machines, and the use of special tools.

The tools used are those of the third year, and also the planer, shaper, milling machine, sensitive drill, upright drill, drills, reamers, arbors, taps, and any other tools needed to complete a piece of work.

Throughout the entire course the pupils in each shop work from blue prints giving details and specifications, or from drawings specially prepared by themselves.

The Chicago Manual Training School (now an integral part of the University of Chicago, with which it was incorporated in 1897) has been adequately described by Mr. Vice-Consul Erskine, and by Mr. J. H. Reynolds in his Report to the Manchester Technical Instruction Committee.

The following is an extract from the report of the superintendent of Boston public schools:—

#### AN INDUSTRIAL HIGH SCHOOL FOR GIRLS.

"There are many persons, interested in the better education of girls, who have been looking forward to the time when the school committee

might see the way clear for the creation of such a school. Probably, in consequence of the rapid shifting of the population now going on in parts of the city, some suitable school building will soon become wholly or partially vacant, so as to afford the desired accommodation."

One has not heard of the happy conjunction of circumstances which should make this school an accomplished fact. But, accomplished or not, the extract shows a direction in which the organisers of public education have for some years been looking.

### (3) *Commercial High Schools.*

Commercial high schools\* are one of the most recent developments in American education, the movement being even now only in its initial stages.

"Within the past decade" [says Professor Ellsworth Brown in the Paris Exhibition monograph on *Secondary Education*] "there has been a growing demand for public commercial high schools in the larger cities. Thus far, comparatively slight provision has been made to meet this demand, but there is reason to expect that there will in the near future be a considerable expansion of our public education on this side. The business high school in Washington, D.C., may be mentioned as one illustration of the serious interest which has begun to appear in this side of secondary instruction."

In a companion monograph on "Commercial Education" Professor Edmund James, of Chicago, says:—

Secondary education of the manual training type is to-day years ahead of the development which would have been possible if the separate manual training high schools had not been established. Place the commercial course in the ordinary high school largely under the charge of the present teaching force and you rob the new movement of half its possibilities. The problem of working out good secondary business education needs all the freedom that is feasible; it can be solved only by independent faculties with every member intent on the questions of his own department, of course, but also grappling with the problem of the entire scheme of studies.

The writer attended a lecture delivered before the Graduates' Club of Teachers College (Columbia University) by Mr. Meleney, Associate Superintendent of Schools for the City of New York, in the course of which the general proposition was maintained that the times demand High Schools of Commerce. Reference was made to the experience gained in the manual training high schools, and to the steps being taken in New York to establish a commercial high school. The education which such a school will give should help to prepare its pupils "for responsible positions at home and abroad in business concerns and in the consular service, and for positions in the Civil Service of the city, the State, and the nation." "In America," said the lecturer, "we have begun at the pedagogical end, and are moving on towards the commercial." One of the reasons for a separate institution with specific aims was the difficulty which is said to be experienced in some places to maintain the dignity of

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\* These are only touched upon here as they form part of the subject of Mr. Hartog's report on *Commercial Education* in this volume.



the commercial course. "It is regarded as an inferior course," owing to a "feeling of aristocracy which exists in the high schools," boys who are fitting for college being supposed to be the strongest students, and often inferior teachers being appointed to the English or commercial department.

### (III.) INDUSTRIAL AND COMMERCIAL EDUCATION IN AMERICAN COLLEGES AND UNIVERSITIES.

The great moment in the development of higher industrial education in America was the passing of the "Morrill Act" in 1862. By this Act grants of land were made by the federal Government for the support of colleges whose chief aim should be instruction in the agricultural and mechanical arts and in subjects subsidiary to these, though not excluding more academic studies. Now: twenty-nine of the States have each its State university, supported wholly or principally from public funds; and in many of these the education is entirely free. In at least one instance, a State united the proceeds of the sale of its grant of public lands under the Morrill Act with money privately subscribed, to establish a strong university; Cornell University resembles in some ways a New York State University, though bearing the name of its original founder. The Massachusetts Institute of Technology also, whilst depending chiefly upon private endowment and tuition fees, receives one-third of the federal Government's land and other grants which fall to Massachusetts.

There are three main groups or types of scientific, technical, and engineering colleges in America: those that are of private foundation, and are independent of State control; those that are affiliated with universities not under State control; those that are maintained largely, if not entirely, by State funds. Of the first class are such colleges as the Armour Institute of Technology, Chicago; Pratt Institute, Brooklyn; the Bradley Institute, Peoria. The Sheffield Scientific School at Yale, the Lawrence Scientific School at Harvard and the School of Mines at Columbia University are illustrations of the second class. The Sibley College of Mechanical Arts at Cornell, like the university itself, holds a sort of intermediate position. The third class is represented by the colleges of mechanics and engineering, and of agriculture, at such State universities as those of Illinois, Wisconsin, Ohio, Minnesota, Tennessee, and by the Purdue University, which owes its origin to the Morrill Act, and is really the institute of technology for the State of Indiana, but assumed its present name when by legislative assent the State accepted a considerable endowment from Mr. John Purdue.

Nearly all of these colleges assume the equivalent of a high school education before admitting students to their technical courses.

The Pratt Institute, Brooklyn,; the Armour Institute, Chicago, and the Bradley Polytechnic Institute, Peoria, have high schools of



their own. To speak first of the Department of Science and Technology \* at the Pratt Institute, Brooklyn.

Special preparation for this course is given in the High School, which is practically a manual training high school, with the following course of study :—

*The figure after each study represents the number of periods (fifty minutes) a week.*

#### FIRST YEAR.

##### *Language :—*

English	-	-	-	-	-	-	-	-	4
German or French, or Latin	-	-	-	-	-	-	-	-	4
History : Greek and Roman	-	-	-	-	-	-	-	-	2
Mathematics : Plane geometry and elementary algebra	-	-	-	-	-	-	-	-	4
Science : Physiography	-	-	-	-	-	-	-	-	2
Music : Sight singing	-	-	-	-	-	-	-	-	2
Drawing : Freehand and instrumental	-	-	-	-	-	-	-	-	4
Gymnastics	-	-	-	-	-	-	-	-	2
Manual Training : Bench-work in wood, simple projects, wood carving	-	-	-	-	-	-	-	-	6

#### SECOND YEAR.

##### *Language :—*

English	-	-	-	-	-	-	-	-	4
German or French or Latin	-	-	-	-	-	-	-	-	4
History : Roman and Mediæval	-	-	-	-	-	-	-	-	3
Mathematics : Algebra and solid geometry	-	-	-	-	-	-	-	-	4
Science : Biology	-	-	-	-	-	-	-	-	2
Music : History and musical form	-	-	-	-	-	-	-	-	1
Drawing : Freehand and instrumental drawing and design	-	-	-	-	-	-	-	-	4
Gymnastics	-	-	-	-	-	-	-	-	2
Manual Training : For boys—Wood-turning, pattern-making, moulding. For girls—Sewing, draughting, cutting, and making garments ; study of materials	-	-	-	-	-	-	-	-	6

#### THIRD YEAR.

##### *Language :—*

English	-	-	-	-	-	-	-	-	4
German or French or Latin	-	-	-	-	-	-	-	-	4

\* Other departments are fine arts, domestic art, domestic science, kindergarten, all having complete normal courses (*i.e.*, training courses for teachers), which require attendance on five days a week for two years, some of the courses running to three or four years. One is tempted to quote in brief the first three normal courses, as teachers go from the Pratt Institute to all parts of America.

*Normal Art Course.*—Freehand and instrumental drawing, cast, portrait, colour, design, modelling, sketching, composition, history of art, psychology, history of education.

*Normal Course in Domestic Art.*—Sewing, dressmaking, millinery, drawing, physical training, psychology, history of education, normal methods and practice teaching.

*Normal Course in Domestic Science.*—Natural sciences : chemistry, physics, and biology (bacteriology, botany, zoology, physiology). Applied sciences ; emergencies, home nursing and hygiene, public hygiene, and household economics. Psychology, and the following allied subjects : History of education, Froebel's "Mother-play," normal methods, and practice teaching. Cookery, dietetics, marketing, and serving. Collateral work ; sewing, drawing, manual training, laundry work, and physical training.

## THIRD YEAR—continued.

<i>History</i> : English	2
<i>Mathematics or Language</i> : Advanced algebra or German or French or Latin	4
<i>Science</i> : Physics	4
<i>Drawing</i> : Colour work and design, or mechanical drawing	4
<i>Gymnastics</i>	2
<i>Manual Training</i> : For Boys—Forging ; elements of decorative iron-work. For Girls—Dressmaking : Designing, draughting, fitting, making lined waist, study of design and colour ; Costume design : Sketching hats, draperies and gowns, outline and proportion of human figure ; Millinery : Finishing hat-brims, trimming hats, study of form, line, colour, and texture	6

## FOURTH YEAR.

<i>Language</i> :—	
English	4
German or French or Latin	4
<i>History</i> : American history and civil government	2
<i>Mathematics or Language</i> : Trigonometry or German or French or Latin	4
<i>Science</i> : Chemistry	4
<i>Drawing</i> : Colour-work, cast drawing, and composition, or mechanical drawing	4
<i>Gymnastics</i>	2
<i>Manual Training</i> : For Boys—Machine-shop ; bench work and machine tools. For Girls—Domestic science, cookery, emergencies and home nursing	6

The physics, chemistry, mechanical drawing, and manual training are conducted in the Department of Science and Technology. With regard to the manual training the prospectus says :—

*Manual Training*.—One-fifth of the time throughout the four school years is devoted to hand and tool work. The purpose is purely educational, the development of a beautiful and accomplished organism ; and, since this power is wrapped up in the tissues of the brain, the work must be regarded as an essential form of intellectual training. The resulting skill of hand and eye makes possible a more complete and useful life. The boys and girls work together in the wood room during the first year, and the results are found to be quite as helpful for the girls as for the boys. At the beginning of the second year they separate, the boys taking, during the remaining years, courses in wood-turning, pattern-making, moulding, forging, vice-work, and machine construction, while the girls have sewing, dressmaking, millinery, and cookery.

The manual training is a distinctive feature of the high school, and is regarded as a part of its most important service.

## STEAM AND MACHINE DESIGN (DEPARTMENT OF TECHNOLOGY).

*Five Days each Week—Two Years.*

The primary aim of this course is to give as sound and thorough a mechanical training as is possible in the limit of two years, and it is especially designed to furnish those who wish to enter manufacturing or industrial pursuits, or in other ways come directly in contact with the design, construction, and operation of machinery of any kind, with a training of immediate value, and at the same time thorough enough to enable them to fill positions of responsibility.

It aims to give a complete technical knowledge and familiarity with the

various types of modern machinery and the forces underlying them, and is intended for those who wish to conduct or superintend mechanical enterprises. The practical equipment which it gives will enable them properly to grasp the problems that will confront them in the draughting room and the shop. For this reason much time is devoted to mechanical drawing and machine design and to shopwork and machine construction.

Each of the students, or a number of them jointly, before the end of the course, construct one or more complete machines, such as a drill-press, a dynamo, an engine lathe, a milling machine, etc. They make the patterns for their own castings in the foundry, and in the machine shop they not only get the experience of building and assembling the complete machine, but also of making the milling cutters, taps, counter-bores, and the other special tools necessary for its construction. Thus they go through the process of manufacture from raw material to finished product.

The instruction in mechanism, mechanics, valve gears, theory of the steam engine and steam boiler, power measurement and transmission, and strength of materials is planned to give a sound knowledge of the principles underlying the construction and operation of all types of machinery.

This class-room training is supplemented by a large amount of practical experimenting in the steam and testing laboratories, and the student is here required to test the accuracy of his theoretical results. Instruction in mathematics is given throughout the two years ; and physics, including the subjects of mechanics, heat, light, sound, and electricity, forms a considerable part of the first year's work.

COURSE OF STUDY.

The figure after each study represents the number of periods a week.

FIRST YEAR.

FALL TERM.	WINTER TERM.	SPRING TERM.
Mathematics . . . 5 (Algebra)	Mathematics . . . 5 (Plane Geometry)	Mathematics . . . 5 (Plane Trigonometry)
Physics (Mechanics) 3	Physics . . . 3 (Heat)	Physics . . . 3 (Electricity)
Physical Laboratory 2½	Physical Laboratory 2½	Physical Laboratory . 2½
Mechanical Drawing 5 (Projections)	Mechanical Drawing 5 (Shop Drawing)	Mechanical Drawing . 5 (Engine Details)
Freehand Drawing . 1	Freehand Drawing . 1	Freehand Drawing . 1
Shopwork . . . 6 (Carpentry and Pat- tern-making)	Shopwork . . . 5 (Foundry and Forge)	Shopwork . . . 5 (Forge and Vice-work)

SECOND YEAR.

Mathematics . . . 5 (Advanced Algebra)	Mathematics . . . 5 (Solid Geometry)	Mathematics . . . 5 (Analytical Geometry)
Mechanism . . . 5	Steam-engine and Steam-boilers . . . 5	Mechanics & Strength of Materials . . . 5
Machine Design . . 5	Machine Design . . 5	Machine Design . . 5
Mechanical Labora- tory . . . 3	Steam Laboratory . 3	Str. of Materials Lab. 3
Shopwork . . . 4 (Machine-work)	Shopwork . . . 4 (Machine Construction)	Shopwork . . . 4 (Tool-making)

NOTE.—All periods in Drawing, Shopwork, and Laboratory are two hours long ; all other periods are one hour each.

APPLIED ELECTRICITY.

Five Days Each Week—Two Years.

This course aims to furnish a preparation suitable for the many who wish to engage in the various electrical industries which are playing a more and more important part in our modern life, and who are unable, for lack of time or means, to obtain a more extensive technical training.

During the first year much time is given to physics. After mechanics,

heat, sound, and light have been considered, the subjects of electricity and magnetism are taken up, and extended practice is afforded with the testing and measuring instruments in the laboratory.

In the second year a further study and practice with the Wheatstone bridge, voltmeter, ammeter, wattmeter, Kelvin balance, and dynamometer is obtained in a specially constructed testing laboratory with isolated masonry piers.

Following this comes study of the principles, operation, and construction of dynamos, motors, and transformers, methods of current distribution, and lighting and power systems.

The class-room instruction is supplemented by much work in the electrical laboratory, which is equipped with a model plant, including automatic engine, various types of dynamos, switchboard, transformers, motors, and lighting apparatus, affording opportunity for experimental study and for varied and continuous practice in the operation of electrical machinery.

### COURSE OF STUDY.

*The figure after each study represents the number of periods a week.*

#### FIRST YEAR.

FALL TERM.	WINTER TERM.	SPRING TERM.
Mathematics - 5 (Algebra)	Mathematics - 5 (Plane Geometry)	Mathematics - 5 (Plane Trigonometry)
Physics (Mechanics) - 5	Physics - 5 (Heat, Light, Sound)	Physics - 5 (Electricity)
Physical Laboratory - 2½	Physical Laboratory - 2½	Physical Laboratory - 2½
Chemistry - 2 (Non-metals)	Chemistry (Metals) - 2	Chemistry - 2 (Qualitative Analysis)
Chemical Laboratory - 1½	Chemical Laboratory - 1½	Chemical Laboratory - 1½
Mechanical Drawing - 3 (Projections)	Mechanical Drawing - 3 (Shop Drawing)	Mechanical Drawing - 3 (Engine Details)
Shopwork - 2 (Carpentry and Pattern-making)	Shopwork - 2 (Pattern-making and Foundry)	Shopwork - 2 (Forging)

#### SECOND YEAR.

Mathematics - 5 (Advanced Algebra)	Mathematics - 5 (Solid Geometry)	Mathematics - 5 (Analytical Geometry)
Mechanics - 3 (Steam)	Mechanics - 3 (Prime Movers)	Mechanics - 3 (Strength of Materials)
Applied Electricity - 2 (Generation)	Applied Electricity - 2 (Transmission)	Applied Electricity - 2 (Motors and Lighting)
Applied Electricity - 4 (Laboratory)	Applied Electricity - 4 (Laboratory)	Applied Electricity - 4 (Laboratory)
Mechanical Drawing - 3 (Dynamo Details)	Mechanical Drawing - 3 (Wiring Plans)	Mechanical Drawing - 3 (Power Plants)
Shopwork - 3 (Forge, Vise-work)	Shopwork - 3 (Machine-work)	Shopwork - 3 (Dynamo Construction)

The social aspects of industrial training were uppermost in the writer's mind when visiting the Institute, and he was fortunate in meeting the head of the iron-working department, and realising in part the aim and spirit of the instructors in their work, as well as its industrial value. It was one of several experiences which went to show that the industrial training given at the best American centres is not a matter of prospectus and catalogue, but a question rather of the spirit infused into the courses by the instructors. "Our aim," said this instructor, "is not to make mechanics of them so much as to make men"; and added, one hopes somewhat hyperbolically: "That's what I lie awake at night thinking about." The constant thought is to appeal to and if necessary to create the motive of interest in the work. "Last

year ten boys asked to be excused the machine work; finding they could not be, they came with kid gloves in the first place,\* but at the end of the year six of them actually went into the department, and were satisfied to start at the beginning. One of them, a boy of well-to-do parents, now puts in ten hours a day, and it will be his line." "The spirit of the teacher," said the same gentleman, "goes beyond that of the instructor; it is more like the feeling of a father for a son. We want to turn out representative men." The combined work of the pupils (generally those in their last year) upon a piece of machinery for use in the workshop has a very good effect. The boys make the various parts according to their ability, yet each boy works on the most important parts of the machine, though perhaps in its rougher phases. "The great effect of this 'project-work' is that each part has to fit the others; and no one wants to spoil another boy's work." Various pieces of machinery bore an inscription such as: "Built by Pratt High School pupils, 1899." "This," said the instructor, "has been part of my equipment for a year." One great feature of the work is to give command of principles rather than mere mechanical details.

An absolutely similar impression was given by Professor Alderson, Dean of the Technical College, and Professor Monin, Dean of the Armour Scientific Academy (spoken of for uniformity throughout this paragraph as the High School), at the **Armour Institute**, Chicago. Pupils are only admitted to the high school after completing an elementary school course. It is distinctly intended to be a preparatory school for the Technical College, the Kindergarten Normal, or some other of the associated departments. The preparatory courses, four in number, have been planned with special objects in view: The first offers the required preparation for admission to the best colleges; the second is announced, in response to numerous applicants and at the request of eminent physicians, for those who wish to prepare for the study of medicine. The third course is the distinctively English course. The fourth presents the minimum requirements for admission to the Technical College, and is to be taken only by consent of the Dean of the Academy. It will be sufficient to give the fourth of these courses, which differs from the others in not having a compulsory fourth year. What is specially remarkable is the academic, as distinguished from the industrial, character of this preparatory course. In chemistry, over and above the three hours of lectures and recitations, four hours a week are ordinarily spent in the laboratory, not only to give a more practical side to the general chemistry, but also as a preliminary training for the more advanced and systematic course in the college. The physics course in a similar

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\* One of the forewords of the section describing the High School Department is: "The school distinctly declines all compulsion in the matter of scholarship and all police duty in the matter of conduct. It is open only to those of earnest purpose and acceptable behaviour."

way prepares for the more technical work of the college. The solid geometry involves less demonstration than the plane geometry, but is made practical by the required use of algebra, the construction of the regular solids, and the application of the principles of the subject to a large number of problems.

## COURSE IV. (Minimum).

YEAR I.	YEAR II.	YEAR III.
Algebra - - - 5	French or German - 5	French or German - 5
English - - - 5	Plane Geometry - 5	Physics - - - 5
English or Greek	Chemistry - - - 5	Algebra Review
History	English Composition 3	Solid Geometry
American or	Freehand Drawing - 2	Trigonometry
Roman History	(During Winter	Mechanical Drawing - 2
Civil Government or	and Spring Term)	English - - - 2
Mediaeval History		Chemistry Review - 1
English Readings - 2		(elective)
<hr/> 17	<hr/> 20	<hr/> 20

In the College course considerable stress is laid upon cultural work. In the freshman year, there are courses in English (composition and literature), which sum up the high school work, extending and enlarging upon it. In the sophomore year, the history of the nineteenth century, the constitutional history of the United States, and the economic history of the United States are taken in the autumn, winter, and spring terms, respectively, two hours weekly. In the Junior (third) year, the principles of economics are studied throughout the year, two hours weekly being given to class work. The course consists of lectures, required reading, and as much "seminar" work as time permits. In the Senior Year are taken logic (one term), psychology (one term), philosophy of the inductive sciences (one term), for two hours weekly. The last-named subjects are made to lead on one to another; thus from economics to logic is a transition from inductive to deductive; "the technical student would otherwise kick against logic." With regard to the senior year, Professor Monin, who conducts the course, said that it is three-fourths ethical; in the second term, James' Psychology (briefer course) is used as the text-book, and the third term's work is "practically ethics." The general statement of the prospectus runs:—

The three courses in logic, psychology and the philosophy of the inductive sciences form a sequence and are intended to acquaint the student with the more important mental processes, assumptions, and laws that underlie all human knowledge. In order "to see life steadily and see it whole" the literary type of collegiate education on the one hand needs at least a certain amount of scientific knowledge and accuracy, and the scientific type on the other hand must be infused with the broadening and inspiring spirit of literary and philosophic thought. It is with this end in view that the course is offered to the seniors. ¶

The four years' courses for graduation in (a) Mechanical Engineering, (b) Electrical Engineering, (c) Civil Engineering.



(*d*) Architecture, (*e*) Science, are printed in full in Mr. Vice-Consul Erskine's report (pages 26 to 35).

Mr. Vice-Consul Erskine also reproduces some of the strictures of the Dean of the Technical College with regard to English technical instruction. The writer's conversation with Dean Alderson showed that the latter had not recovered from the mood of angry surprise which his visit to English technical schools had produced. He visited such as he was told were "types of all there was to be seen"—and, judging from the towns he mentioned, one would imagine this to be the case—he "went round them religiously, and made up his mind that they were leaving out the moral side." There were courses in pure and applied mathematics, pure and applied sciences, but we were "not working to make the man." "Here it is the man first, and the engineer second." "The course of training which is "best for a young man to follow, in order best to fit him for success in the line of engineering work, seems unknown to the English." The dean spoke half apologetically, by way of parenthesis; confessed that it had been a matter of surprise to him, and that when he had given utterance to his impressions in a public address at Buffalo, before the Central Railway Club—the speech which Mr. Vice-Consul Erskine quotes—the audience was equally amazed, and he had then and there either to "prove his statement or eat his words." Amongst other points of criticism was one concerning our system of examinations. "The examination system as conducted in England is the bane of the work. It is the only country in the world where you are shown an examination room as a special point of interest." (*See also Appendix E, p. 201*).

One might write of the **Bradley Polytechnic Institute** at Peoria (Ill.), the dean of which is a young Englishman, but it would only be to indicate the same general phases of the industrial education movement as other institutes of the kind present. Like Pratt and Armour Institutes, the Peoria Institute combines high school and college work. It has been heartily welcomed as an addition to the city's opportunities by the superintendent and board of education, and of the 347 students enrolled in 1899, 243 were from Peoria. The institute has been freely written about as showing how mental and industrial education may be combined. The Bradley Institute is also like the Pratt and Armour Institutes in being of private foundation, having been originally planned by Mr. and Mrs. T. S. Bradley as a memorial to their deceased children, and the idea having been carried out by the latter after her husband's death. Her wish has been "to afford the young people of Peoria and vicinity an opportunity to acquire a practical and serviceable education, and particularly to teach them to work, and to regard work as honourable." The institute was opened in 1897. The school was described by the dean not so much as a manual training high school, but as a high school including such manual arts and domestic economy as the promoters of the school believe

all high schools ought to include for complete intellectual and moral culture.

The Bradley Institute has one or two special features, one of the most important being its affiliation with the University of Chicago, so that its two college years (freshman and sophomore) run *pari passu* with and are accepted as the equivalent of the freshman and sophomore years at the University. The institute grants the diploma of Associate in Science, or Arts, or Literature. There is no financial connection between it and Chicago University. The following is the general statement of the curriculum :—

*Period.*—The Courses of Study are arranged so that a student may enter at the end of the common school course and continue through six years' work ; gaining, first, a broad and practical general education, and in addition special preparation for one of the following pursuits : (1) Business, Trade or Technical Work. (2) Advanced Study in a College, University or School of Engineering. (3) Professional Study in Law or Medicine.

*Divisions.*—The six years of study are divided into three two-year periods, as follows :—

*The Lower Academy* (First and Second Years).

*The Higher Academy* (Third and Fourth Years).

*The College* (Fifth and Sixth Years).

1. *Lower Academy, corresponding to the first two years of a High School Course.*—The work of the Lower Academy aims to lay a firm and broad foundation ; moreover at this period, in most cases, neither pupil, teacher, nor parent can decide rationally upon the peculiar bent of the pupil's mind ; for these two reasons the curriculum for this period is made to include a wide variety of work, and is the same for all students.

2. *Higher Academy, corresponding to the last two years of a High School Course.*—When the student reaches the Higher Academy, some knowledge of his special tastes and aptitude has been gained. He is then allowed to specialise to a limited extent.

3. *College, corresponding (according to the group) to the Freshman and Sophomore years in a College, University, or Engineering School.*—In the College the special work is carried forward, with a large amount of freedom, including a certain amount of purely elective work.

For the student who has passed the Lower Academy, six groups of studies are open. Five of these groups are marked by a large proportion of a certain kind of work, and are named in accordance with this fact as follows : Science Group, Engineering Group, Mechanic Arts Group, Classics Group, Literature Group ; the sixth is called the General Group.

The significant symbols of the **Massachusetts Institute of Technology** are a book and an anvil, and its motto *Mens et Manus*. It offers a college, that is a post-high school, course pure and simple. One finds many traces of the hand of its late President, Francis A. Walker. There are some twelve or thirteen distinct courses leading to graduation (B.Sc.), each of four years. Whilst it is primarily a school of industrial science, a definite place is given to language, literature, history, and economics. The study of these subjects forms part of the courses for at least three years (English is required during the first two years in all cases) ; and the tendency has been to develop what may be called the humanistic element rather than to diminish it. The choice of course is made during the first year, the aim of each course being stated in a few introductory words, showing

the career or profession for which it is designed to prepare. Over and above the engineering courses of various kinds, there are courses in architecture, chemistry, biology, physics, geology; and there is a general course "for those students who wish to secure an education based upon scientific study and experiment, but including a larger amount of philosophical study in history, economics, language, and literature than would be consistent with the technical requirements of other courses." This course, quoting from a calendar of a few years back, is adapted for those intending to enter upon trade, banking, manufacture, journalism, or the teaching of social and political science. "It is particularly intended for those who seek administrative positions in business, where in place of detailed technical knowledge, a more liberal training is of great advantage, and where a systematic study of political and social relations and familiarity with scientific methods and processes are alike essential. . . . The curriculum has been arranged in the belief that the origin, growth, and laws of political and industrial society can best be approached through the methods used in natural science." Physics and chemistry are therefore included—a new phase of the humanism of science, that which arises from the historical treatment of the sciences being already somewhat familiar—and "from the study of biology, including botany and zoology as a basis, the student is prepared to proceed to the study of man in society, and to consider the history and significance of social institutions, such as the family, the State, and the Church. Physical science, biology, anthropology, social science and history, political and industrial history, and international law thus present, throughout the course, a definite progressive relationship." Mr. J. H. Reynolds speaks in high praise of this world-famous institute, quoting Mr. W. Mather's opinion that it is "the finest technical institution in the world." For an account of the excellent laboratory equipment, the continuous growth of the departments, the hours allotted to manual instruction, the success of women students, and the value of the institute to the engineering world (out of 366 students who had graduated from the mechanical engineering department, 311 being then known to be actively engaged in various branches of the engineering profession) reference may be made to Mr. Reynolds' Report (pages 7 to 10).

Judging from more than one statement, America has taken Germany and Switzerland for her models in their methods of industrial training.

#### *The business value of a college education.*

As to a college in the sense of a university education, one of the discussions of the day turns upon the question. Does a college education pay? Inasmuch as this was formerly always answered in the negative, the fact of the point being debated shows a decided tendency to a change of view. One of the most notable contributors to the debate is ex-President Grover Cleveland, who in an article under the above title, which appeared in a well-known weekly

journal in the early summer of 1900, answered the question in favour of a college education. At New York and Cambridge (Boston) the same opinion was expressed. The librarian of the Columbia University, himself a former university president (*see also* page 227), said that not long before a New York business man had been asking him what young men they had at Columbia who were just finishing their courses, and stating that he was prepared to start young university-trained men of the right kind at a salary of \$5,000. The whole question was ably and succinctly argued in an article in the *Educational Review*\* by Mr. J. Branch Taylor, originally read before the College Alumni Club, at Bloomington, Illinois, in November, 1899. After noting the importance of business, and expressing "little sympathy for those who fail to brace themselves up to the righteous demands of society, and talk of the sordidness and low plane of business," the writer asked, What are the cardinal elements of the business faculty? and answered, Penetration, tact, and nerve. "The fundamental of fundamentals for all success and for all activity is simply, clearly, without distortion, and with no fictitious elements, to see." This clear vision the business man would "invoice for himself under the plain name of 'level-headedness' or 'horse-sense'; but it is insight, penetration—magnificent, effective, unshackled sight. . . . And when we define the business man as a *gatherer* of facts through external observation for practical use, we declare that his vision is alert as well as clear." He is "keen-sighted," his faculties are actively turned outward. "A second cardinal trait of the successful business man is the power of setting up combinations—the tactical sense. . . . He measures the existing situation and matches it. . . . It is the vital spirit of enterprise. Third, nerve—the quality which puts one in the teeth of difficulties and opposition, and keeps him there—which makes a man calm in the face of waiting—which keeps him steady under pressure—which quiets his thinking so that he can measure things as they are, no matter how complex or how threatening, without trepidation. . . . We have our question, therefore, reduced to somewhat definite terms and are asking it in different form when we inquire: In how far do our colleges contribute to clear, unhindered vision and the habits of close observation? To what extent do they promote the talent of moving to certain ends by chosen means and selected combinations? How far do they cultivate independence, firm-knit individuality, a manly assertion of self in the world?" The writer of the article first takes up the case against the colleges, and admits that the cloister spirit, the spirit of immurement from the world has lain against business faculty because "separated by a whole diameter from the spirit of external observation. . . . If any men of strong character brought away business aptitude from the domain of such

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\* March, 1900. Columbia University, New York; J. M. Dent and Co., London. The title of the article is *College Education and Business*.

a spirit, it was, in its relation to that spirit, a survival and not a product. It was Jack, of Bean-stalk fame, escaping by his agility." This spirit, "as it has marked our colleges historically, and in whatever degree it exists in them to-day, is unfriendly to external observation and to business." Also, there was "in the college course as we knew it not only scant cultivation of the tactical sense, but much that was against it. . . . Over-valuation\* of pure intellectual truth, . . . Oriental repose and contentment of mind which find the chief purposes of life in lofty association with intangible entities," have contributed strongly to habits of mind which are out of harmony with the practical plan of gathering truths together for a set purpose, and have induced an attitude which "renounces a campaign while it waits for an inspiration." As to courage and tenacity of purpose, "a to-and-fro concession is to be made." But the writer of the article strikes a new and not untimely note when he refers to the unbusinesslike character and spirit of "college hoodlumism"—"the free and often reckless collegian spirit which lurks within the college walls for many students; which transplants their citizenship as they interpret it . . . to a region quite aloof from the ordinary social limitations and the social order. . . . What fellowship is there between such a spirit and the steady, systematic spirit of business? True, the fact of malarial infection in Central Africa does not mean that all men *must* catch the fever or must die of it, but it does mean that it is appropriate to figure it into the problem." Then, early identification with his work leads to the "unification of a man with his business—an imperative necessity for high success. . . . History speaks loudly of the factor of long seasoning for successful men." Alexander, Nelson, Napoleon were "unifying themselves with their future calling" at fifteen years of age. Pirrie, Wanamaker, Johns Hopkins, Gould, Carnegie, Rockefeller, Clews, Morgan, Vanderbilt, Armour, Peabody, Cornell, and other American "surname men" (twenty in all) are cited, yielding sixteen and a-half years as the average age for entering business, and twenty-two years for partnership or its equivalent. These men graduated in the business world, and not from college. The pronouncements of Carnegie and Clews are quoted, "too classical to be threadbare, and so pertinent that no case can be set up without them"; it will be sufficient to quote parts of these. Says Mr. Carnegie:—

"The total absence of the college graduate in every department of affairs should be deeply weighed. I have inquired and searched everywhere, in all quarters, but find scarcely a trace of him. Nor is this surprising. The prize-takers have too many years the start of the graduate; they have entered for the race invariably in their teens—in the most valuable of all the years for learning anything—from 14 to 20. While the college student has

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\* "We might, perhaps, better say *mis-valuation* than over-valuation, Neither term implies any derogation from intellectual truth in its own sphere."



been learning a little about the barbarous and petty squabbles of a far-distant past, or trying to master languages which are dead, such knowledge as seems adapted for life upon another planet than this as far as business affairs are concerned, the future captain of industry is hotly engaged in the school of experience, obtaining the very knowledge required for his future triumphs. I do not speak of the effect of college education upon young men training for the learned professions; but the almost total absence of the graduate from high position in the business world seems to justify the conclusion that college education as it exists is fatal to success in that domain. The graduate has not the slightest chance, entering at 20, against the boy who swept the office, or who begins as shipping clerk at 14. The facts prove this."

Says Mr. Henry Clews:—

"I have given it some thought, and my conclusions are the result of my experience. I might say in the beginning that I do not employ college men in my banking office. None need apply. I don't want them, for I think they have been spoiled for a business life. . . . Spending several of the best years, the years when the mind is most active and most open to impression, in learning a lot of things which are utterly useless for business. Business requires the undivided mind. I think that a man has just so many niches in his brain. In each niche so many facts, so many negatives, as it were, fit, and then the niche is full. Now, at college a man is busy filling up the niches, and if he goes through college in the right way his niches are all full.\* When he comes to business he has no room for it, or if he has a little room it is such a little and is so crowded that business affairs have very little show. In law, medicine, and that sort of thing, college education is all right. The niches are filled with things which are useful to a professional career. But in business the college education is all wrong, worse than useless. No, the college man is not the successful man in money affairs. It is the man who has started in as an office boy, and who gets the education of keenness and practical knowledge that comes from early contact with business men. He has his natural sharpness and originality, and the edge of it is not dulled by ideas and theories of life entirely out of harmony with his occupation."

Mr. Branch Taylor cannot be said to have minimised for himself the task of replying in behalf of a college education. Yet, in answer to his own strong putting of the opposite case, he is able to bring forward arguments of very great weight; some of these, it must be confessed, apply with much greater force in America than they would do in England—especially in the case of those based upon the newer conception of education and the new methods of instruction. In the universities, *e.g.*, as elsewhere, the teacher is looked upon not so much as a dealer in knowledge as a trainer of men.†

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\* What, probably, those think who advocate a college education is that a brain (or mind) is not a cabinet of niches or compartments, but an organism capable of development and one of whose chief functions is the interconnection of niches. The great mind whether in business, politics, science, or literature, is one in which the power of constructive co-ordination is strongly developed. May there not be in the fact that so many of the names already quoted are associated with munificent endowments of higher learning, especially in its bearings upon industry and commerce, an indication that the vast business interests of the future may require a more liberal training of the faculties during the formative period than business life in its early stages can afford?

† *Cf. Individuality and the Moral Aim in American Education*, pp. 76–80, *et seq.*, and pp. 234–39.



Mr. Taylor's reply consists of five leading points—

1. That the colleges and universities, so far from declining, are being liberally supported, and that the men who have climbed from sweeping the office or being shipping clerks at fourteen, "have been generously and numerous founding colleges for the good of mankind."

2. There are evidences of new influences abroad, whereby men think of things differently, making new things out of their tasks and occupations as they have thought of them differently. "Not only 'as a man thinketh, so is he'; but as he thinks, so is his work. Hence a new spirit is characterising college officials. They are appearing more and more in the rôle of business men. The new president of old hyper-conservative Yale studies railroads, comes to stand as an international authority on those broad and strenuous business questions, and goes to his high office from the chair of economics. President Harper (Chicago University, formerly professor of Hebrew at Yale) combines the shrewdness of the Wall Street speculator and the president of a bank, swaying the 'captains' and higher than captains 'of industry' by his ability. . . . \* There is demonstrably something abroad relating all departments to practicality. It bridges unexpected chasms. The Egyptologist is a man of affairs. The Greek or theology instructor becomes a financial manager." This give-and-take between cultural and practical interests is equally well matched from the other side. Francis A Walker, to whose studies in political economy the whole world is indebted, was for many years president of the Massachusetts School of Technology at Boston; and Dr. Gunsaulus, the present president of Armour Institute, is one of the greatest art critics in America, and the pastor of the Central Congregational Church in Chicago. The opinion appears to be widely held that, where the highest leadership and direction are concerned, no man can be an expert in a subject or in a position who is not able to look beyond it and take the broader issues into account. Perhaps, too, these cases may be cited as the culminating point of the encouragement of versatility, the development of an all-round individuality, which the writer has already referred to in this and in each of his other reports.

3. There is a new conception of education. "A small angular variation in fundamental thinking as to this or that determines often the whole caste of civilisation of the era." The change that has taken place is in man's relation to his own outer and inner world. In the new attitude towards nature and the outer world

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\* Whatever President Harper's reputation as a man of business and a scholar, as an educator he has still an open heart towards young children; the Sunday school of which he is superintendent, popularly called on this account, and from the fact that many of the university staff are associated with it, the "University Sunday School," is on Sunday mornings surely one of the brightest scenes of child life to be seen anywhere in the world.

introduced by science there is "a new setting of thought and values and life."

"It is inevitable that this change in philosophic conviction should have affected education in a revolutionary way. The whole drift of present educational thinking is to produce the efficient man—the man related by forceful deeds to the world without. The angle and purpose of instruction are different. The newer education has set itself the task of producing the man who will *do*. Said my friend, a professor who is not quite in harmony with the new movement, "There is absolutely nothing left of the old serenity of thought which found its enjoyment in the contemplation of its own acquisitions. Everywhere," said he, "they are grinding an axe to go out and do something." And the professor's scorn was the harbinger of a new era. The "degeneration" is not so universal as he pictures it; but the revolution is in process. It is part of a large uplift which has a coherence and a force beyond what man has intentionally put into it. It belongs to a wide evolutionary movement which is underneath society, and will go on."

4. There are new methods of instruction. "Under the newer conception that the purpose of education is to produce the forceful man, leaders of thought who illustrate the new régime are emphasising more and more the cultivation of the will—that is, of man as a *willing* person, destined to act. The difference of handling all themes under this idea is radical. The degree to which this thought of producing manliness in students is actively applied in our modern institutions would be a surprise to those who do not appreciate the elasticity of the situation, but stand by with eyes shut while a great revolution is going on. Interesting illustrations could be given from actual life. . . . The same influence and principles are seen welling up in the common schools. That institution or chair or child's-room which does not illustrate them is simply a relic, and must fall into line."

5. There is not merely "a new college spirit looking more to practicality," but courses are presented "in which that practicality has fully expressed itself. These courses are logically and as a fact the *crux* of the situation. . . . The crystallisation of the new educational thought into specialised courses was inevitable. They were of the essence of the movement. If *doing* is the purpose of education, then education must take one early and train him by preference in the high function of doing.

"The University of Illinois (cited as belonging to the State which first memorialised Congress to grant lands for the endowment of 'universities for liberal and *practical* education among the people') offers four-year specialised courses in agriculture, architecture, economics, civil engineering, mechanical engineering, electrical engineering, municipal and sanitary engineering, and applied mechanics—eight of the businesses of life. Elsewhere are departments or special schools in mining and metallurgy, in the various

able to contribute to it. Three-fourths of the States have universities promoted by the Morrill Act, and in good degree carrying out the purpose, and the number of the technical schools is very considerable.

It is safe to say that one can find specifically-affected courses—courses as direct as the training of a soldier for life calling, which is an instructive type of special preparation—in at least fifteen of the businesses of men.

The central point of our whole discussion is the claims of these specialized courses. They focus the contention in a final and sharp way, and the discussion hinges with them.

There are several in the advantage of early identification of a man with his business. They meet the requirement of growing into the business, and the business into the man. They make a

more generally common sense of the work of his future work.

But the chief advantage is that it is a direct method of training. It is a direct method of training. It is a direct method of training.

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very largely separate instructors, when the school of commerce is made a part of an existing college or university. . . . These schools would then stand in a supplementary relation to the higher industrial and engineering schools. While the latter train the captains of industry, the former train the men to exploit the products of these industries in all foreign countries. In the development of our foreign commerce one is as essential as the other."

The report, from which fuller extracts are given in Appendix E, was signed by representatives of the University of Wisconsin; Washington University, St. Louis; Cornell University; the University of Minnesota; the Massachusetts Institute of Technology; and the University of Pennsylvania.\*

One may now turn to various reports to see what the colleges are doing by way of adjusting their courses to meet industrial needs. Chapter XLII. of the 1897-98 Report of the United States Commissioner of Education, on *Institutions for Higher Education in the United States*, contained the following paragraph on "New Courses of Study":—

"The Graduate School of Railway Mechanical Engineering was authorised by the board of trustees of Cornell University, in June, 1896, and was organised in February, 1898. The courses in this school will have special relation to the design, the construction, the operation, and the test trials of locomotives and other kinds of machinery employed in railroad operation.

"The New York State College of Forestry, at Cornell University, established by an act of the legislature of the State of New York, approved March 26th, 1898, was opened for instruction in September, 1898. The legislative act provides a grant of 10,000 dols. and the use of 30,000 acres of land in the Adirondack forests as a demonstration area, and that the College of Forestry 'shall conduct upon said land such experiments in forestry as it may deem most advantageous to the interests of the State and the advancement of scientific forestry, and may plant, raise, cut, and sell timber at such times, of such species and quantities and in such manner, as it may deem best with a view to obtaining and imparting knowledge concerning the scientific management and use of forests, their regulation and administration, the production, harvesting, and reproduction of wood crops and earning a revenue therefrom.' The college was organised by the appointment of a director and professor of forestry, and an assistant professor of forestry and forest manager. There have been arranged a full four-year course leading to a degree of Bachelor of the Science of Forestry, a one-year special course, and a one-term synoptical course. The four-year course is planned to give a thorough knowledge of all branches of the profession and to prepare men to manage and administer forest estates for private owners, or for the State or national government, and also to teach the profession in the colleges which are likely in the near future to establish chairs of forestry science and practice. This course comprises in its first two years the basal or preparatory studies of mathematics, natural science, engineering, political economy, etc., its last two years being devoted

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\* Further extracts from this report are to be found in Appendix E relating to Trade Schools

to the purely professional subjects. The one-year special course is planned for farmers, lumbermen, and others not desiring a general scientific training, but wishing to acquire such technical and practical knowledge of forestry as will enable them to manage more intelligently and economically their own woodlands. Finally, the one-term synoptical course will meet the requirements of students of political economy and others wishing to make a brief survey of the subject of forestry as a matter of general education.

"The School of Library Science, which had been conducted at Armour Institute of Technology, Chicago, Illinois, since September, 1893, was transferred to the University of Illinois, in September, 1897, and offers a four years' course of study leading to the degree of Bachelor of Library Science. Two years of the course are devoted to general university studies and the last two years to technical library work.

Chapter XLIV. of the United States Commissioner's Report for 1897-98 on *Agricultural and Mechanical Colleges*, contains a full statement of new buildings and of changes in the course or in the methods of instruction from the reports of the presidents of a number of universities, and agricultural and mechanical colleges. The following items are taken from this chapter:—

*President John L. Buchanan, Arkansas Industrial University.*—No material changes have been made, but there have been some important additions to the course. The chair of economics and sociology was filled by the election of a competent professor and a four years' course of instruction in those subjects provided. The art department was duly organized and a convenient and commodious studio, with a partial outfit, provided for it. Fuller and more definitely outlined courses in agriculture and horticulture have been introduced. The work of the session suffered somewhat from the war excitement. A number of students volunteered, some of whom, as well as a number of former students, received appointments as officers, owing principally to their military training received here.

*President F. B. Gault, University of Idaho.*—There has been erected during the year a greenhouse for a horticultural department in which instruction is to be given in floriculture and greenhouse management. There is a building, a story and a half, in front of the greenhouse, for class room and other horticultural work.

*President J. H. Smart, Purdue University.*—Our course in railway engineering and management has been greatly enlarged. A noteworthy increase in our attendance has occurred, the number of students now being 750 with 57 post-graduate students. . . . A one-story brick building, 50 by 100 feet, with corridor 20 by 40 feet, to be used for our railway testing department, has been built, and a greenhouse for the horticultural department, the last containing three rooms, one for a work-room, the other two affording different degrees of temperature. For the extensive course in electrical engineering, the building and equipment of which is valued at 55,000 dols., a one-story brick addition has been added, 63 by 26 feet.

*President A. W. Harris, the University of Maine.*— . . . The number of students in electrical engineering exceeds that in any other line.

*President Henry H. Goodell, Massachusetts Agricultural College.*—The State has this year appropriated 25,000 dols. to erect and equip for class instruction and original research a two-story veterinary laboratory of brick, in connection with a hospital stable, likewise of brick, where diseased animals can be observed and treated. It has also erected and equipped, at a cost of 2,000 dols., a small plant to be used exclusively in solving dairy problems.

*President Cyrus Northrop, University of Minnesota.*—The instruction in the lines of agriculture and mechanic arts in the university has been somewhat broadened during the last year, more attention having been given to forestry and general agriculture and to electrical engineering and to railroad engineering. Indeed, there has been improvement along all the lines of study. The work in both colleges of agriculture and mechanic arts has been most satisfactory. Four hundred and seventy students have been connected with the agricultural department during the year, 129 with that of mechanic arts, and 54 with that of mines.

*Chancellor George E. MacLean, the University of Nebraska.*—During the past year the Faculty made a study of the curricula of leading institutions in this country and Europe. They further studied the registration of students in the college during the past five years to see what had been the demands made by the students. . . . It is believed that the university has met local demands.

*President J. E. Stubbs, Nevada State University.*—(1) Courses of instruction. The organisation of the university comprises the following schools of instruction and training: (a) The school of liberal arts; (b) the school of mines; (c) the school of agriculture; (d) the school of mechanics; (e) the school of civil engineering; (f) the State normal school. The school of civil engineering was opened last year. The school of mines naturally maintains a leading position in the interest of the people of this State. The school of agriculture will receive more attention in the next five years than hitherto, for the reason that there seems to be a growth of interest in the subject of agriculture in this State.

*President James H. Canfield, Ohio State University.*—There has been a gain in our attendance of about 12½ per cent. The greatest gain in any one college is that in the college of agriculture and domestic science—nearly 50 per cent. The agricultural experiment station being a separate institution in this State, we have but few experiments to report. Those for the past year have been chiefly in the study of soils and in the study of the possibility of successful beet-sugar culture in this State.

*President Charles W. Dabney, University of Tennessee.*—The agricultural science course has been still further expanded, so as to give greater liberty of election in languages, literature, and history, and to provide more thorough and complete instruction in the sciences pertaining to agriculture. The engineering courses, which are the same in the freshman and sophomore classes for mechanical, electrical, civil, and military engineering have been further expanded, so as to provide special study under each of these heads in the junior and senior years. Some studies continue the same in all, but greater differentiation and liberty of election is provided, so as to permit students to specialise more than was possible under the old courses. In the same manner the chemical group has been arranged so as to permit students to specialise in general analytical chemistry, mining chemistry, metallurgy, pharmaceutical chemistry, or agricultural chemistry.

*President C. K. Adams, University of Wisconsin.*—During the year there has been constructed a dairy barn and stock-judging building, costing \$16,000. The equipment, including electric motors and other machinery, adds \$2,000. The building has a frontage of 86 by 50 feet in depth, with wings 70 by 110 feet. The third floor of the barn, which is the principal one, is approached by a steel trestle bridge leading from a slight elevation near by. The stables are arranged to take advantage of our present knowledge of the requirements of sanitary engineering. There are provisions for a liberal allowance of sunshine, ample ventilation, and the walls and floors are so constructed that the rooms can be flushed with water daily if desired. The stock-judging room (with skylights) covers 40 by 70 feet. Architecturally, the building is a reproduction of a farm building in Normandy, France.



*President W. H. Council, president Agricultural and Mechanical College (coloured), Alabama.*—A college department has been added. Seay Hall, burnt February 9th, 1898, has been rebuilt, mechanic arts building repaired, and an engine and boiler, and sawmill, painting, mattress-making, wheel-wrighting, and foundry departments have been added.

*President John H. Jackson, Kentucky State Normal School for Coloured Persons.*—We have built an addition, consisting of six rooms and a chapel, to our main building, at a cost of 3,625. We have done some elementary work in electricity, but have given much more attention to awaken the interest of our students in agriculture. We have engaged in an effort to thoroughly study the growth and culture of the sugar, and we hope to be able to report upon what we have done at an early date.

The writer met the president of the **Slater Industrial and State Normal School**, N. Carolina, for negro youth of both sexes. Originally a private institution, the attention of the State was drawn to its work, and a grant is made of 3,000 dols., which covers the cost of tuition of fifty coloured teachers. There is a four years' academic course. The industrial courses include agriculture, carpentry, shoe-making, brick-making for the boys; cooking, laundry-work, sewing, general house-keeping for the girls. With a view to training in self-help and self-reliance, there is no hired help on the premises, excepting that of the teachers. The students do all the manual work as part payment for their education: all the buildings are constructed by members of the mechanical and industrial departments, and all bricks used are made on the grounds by students. The work has support from both white (local and other) and coloured people, one ex-slave having given 5,000 dols.

Many of the above reports indicate that a considerable amount of attention is being given to the scientific **study of agriculture**. The extracts which follow bear more directly upon this point:—

*President James Reid, Montana Agricultural College.*—The changes have been as follows: The domestic science course has been changed from a two year to a four-year course. Upon the completion of the course the degree of bachelor of science is conferred. The course in agriculture also covers four years, and upon its completion the degree of bachelor of scientific agriculture is conferred. The veterinary has been changed and remodelled for an engineering laboratory, costing about \$1,200. The work in this laboratory will be chiefly in electrical lines.

*President Thomas E. Wall, Kansas State Agricultural College.*—Extensive changes in the course of study have been made during the two years ending July 1st, 1898. The work was begun at the close of the fiscal year ending July 1st, 1897, and is still in progress. The principal object of the changes was and is to emphasise the work in agriculture and mechanic arts, and also to give more prominence to studies conducive to civic intelligence and good citizenship. Special four years' courses in agriculture, household economics, architecture, and a short dairy course have been added.

*President G. W. Allen, Storrs Agricultural College.*—The course is now four years in duration, with full lines in English, agriculture, horticulture, mathematics, veterinary science, physiology, mechanical drawing, and work in wood and iron.

*President James R. Dudley, Agricultural and Mechanical College for Coloured Persons, North Carolina.*—A woman's course has been added, in

which is given special attention to domestic science. Two frame buildings have been erected, one for instruction in dairying, the other to be used as a barn. These buildings cost about \$3,500.

*President H. B. Frissell, Hampton Normal and Agricultural Institute.*—A new feature of our field work has been the establishment of a model farm of four acres, equipped with stock and a model barn. Many of our students come from small farms, ranging in area from one or two acres up to ten or twelve, and the object of our four-acre model farm is to give them practical experience in so managing a small area that it will grow sufficient produce to maintain at least one horse, one cow, one pig, some poultry, and supply a medium-sized family with the necessities of life, while maintaining, if not increasing, the fertility of the land. Aside from this, our field work has been, as usual, experimentation in a simple way, to give the students practical demonstrations of the truths and principles taught in the class room. In our new domestic science building, which has been constructed during the year, six rooms, covering 10,000 square feet of floor space, have been equipped for the use of the department of agriculture. These rooms are (1) a museum and a lecture room, (2) a chemical laboratory, (3) a laboratory for botany and horticulture, (4) a farm engineering room, (5) a dairy, and (6) a farm laboratory. These additions will greatly facilitate our work.

The President of the University of Nebraska, part of whose report has been already quoted, says :—

In the autumn of 1897 the enlarged dairy building was completed and opened. In addition to the accommodations for the farm and dairy school, it has specifically for the experiment station a botanical and horticultural laboratory and a laboratory for the study of soil physics, while a new wing to the barn gives relief to the former overcrowding and affords an opportunity for experiments in feeding.

Cornell University has very prominently identified itself with the study of agriculture, both in the university, in the public schools, and by the farmer in his own home. Between 1886 and 1898, fifty-six students took the degree of Bachelor of Science in agriculture, and between the years 1891 and 1898, nineteen graduated as Masters of Science in the same subject; not large figures, perhaps, as compared with the totals of 3,207 and 378 for first and advanced degrees respectively during the same periods, yet sufficient to indicate that the subject is being taken seriously.

Especially interesting is the university extension work in agriculture which is organised at Cornell with great thoroughness. As it is of considerable value to trace such a movement to its source, and to note its early beginnings, one may quote from the first report of the work published in 1897 : “The law under which the extension teaching of agriculture is now being prosecuted in New York State by the College of Agriculture of Cornell University, at first was an Experiment Station measure. The Bill originated entirely with the people.” The first form of the request was for experiment work to be done in the vineyards. The representative of the county obtained a grant in the New York State Assembly of \$16,000. The movement was therefore “initiated and pushed to a final passage wholly by a farming community.” The work was at once mapped out by Professor L. H. Bailey, who was appointed to direct it, as of a threefold character : research in the orchards, vineyards, and gardens ; teaching ; publication. This first report says :—

The work has practically resulted in a broad study of rural economics. We conceive that it is impossible to really extend the experiment station and university impulse to the people in such manner that it shall come to them as a living and quickening force, without first studying the fundamental difficulties of the farmers' social and political environment.

We have tried to set forces at work which would silently extend themselves when we had left them. The hard times and the multitudes of bugs and special difficulties have driven people to thinking and to asking for information. The agricultural communities are thoroughly aroused, and now is the time to teach. When one is thoroughly prosperous in his business there is little chance—as, in fact, there is generally little need—of teaching him other methods.

The efforts to reach the people in the progress of our work may be classified under five general heads. These efforts have all been experiments in methods of extension teaching as applied to horticulture. We have tried to ascertain the value of—

1. The itinerant or local experiment as a means of teaching.
2. The readable expository bulletin.
3. The itinerant horticultural school.
4. Elementary instruction in the rural schools.
5. Instruction by means of correspondence and reading courses.

For a short account of the work done in the schools and the motive of it, one may refer to Professor Bailey's communication on the subject to the Committee on Rural Schools, from which extracts are printed in Chapter XVI. of the Report on *Moral Education in American Schools*. In connection with the children's work, the Cornell College of Agriculture now issues a monthly illustrated leaflet, called the *Junior Naturalist Monthly*, dealing with such topics as "How to get the toad to tell his story," "The four chapters in an insect's life," "The coming of spring." Then there are other illustrated leaflets sent to members of the Junior Naturalist Club, such as "The story an apple tree can tell." But, the 1897 report continues, "*it will, of course, be futile to attempt to instruct the children of the State in Nature-study by means of instructors from Cornell University. We therefore conceive that the real work to be done is to instruct the teachers in the methods of imparting this instruction.*" It is with this thought that we began a series of teachers' leaflets, and we purpose to present the work at the teachers' institutes and eventually, perhaps, in the normal schools and training classes of the State." This also is being carried out in a very thorough fashion. There is a Home Nature-study course based upon the *Teachers' Leaflets on Nature-Study*, consisting of a series of questions which the teachers may work up. For example, in November, 1898, an admirably written and illustrated pamphlet was issued to teachers on *The Life History of the Toad*. This ran into a great number of editions. In May, 1900, a "quiz," or paper of questions, was sent round to teachers taking the home Nature-study course; the guiding principle, taking this one study as a sample, being to get knowledge about toads from original sources; this being "true Nature-study." The questions began, Have you looked for toads' eggs this spring? Where, and with what success? Has it been possible for you to make a visit to a pond or

stream in order to make observations on the habits, food, and environment of the objects we are studying? What do tadpoles feed upon? etc., etc.\* The *Cornell Nature-Study Quarterly* is also intended mainly for teachers. There are also Farmers' Reading Courses, taking up such questions as: The soil; what it is; The problems of impoverished lands; Balanced rations for stock; Tillage and under-drainage. "Quizzes" are sent out also in connection with these courses, and readers are encouraged to form themselves into reading circles, to meet once or twice a month, in order to discuss the problems raised by the lessons. In a report of the work issued in February, 1898, it is stated: "Thirty thousand teachers are enrolled on our lists and have received leaflets, and many have attended the lectures explaining the methods of presenting nature-study work in the schools. Sixteen thousand school children have received those leaflets which are especially adapted to their needs. Two thousand five hundred young farmers are enrolled in the agricultural reading course."

Similar extension work is done elsewhere in America. The writer has traced references to it in connection with Purdue University and Maryland Agricultural College.

According to the report of the United States Commissioner of Education for 1898-99 (Chapter XXXVII., *Institutions for Higher Education*, Statistics, Table 44), twenty State universities, five other universities, and twenty-seven State agricultural or agricultural and mechanical colleges had courses in agriculture. There is also a full account (Chapter XXXIX.) of agricultural and mechanical colleges, under the headings of (1) general statistics; (2) new buildings and changes in the course or in the methods of instruction; (3) instruction in dairying; (4) instruction in domestic or household economy and art.

#### (IV.) TRADE SCHOOLS.

Trade schools, as may be seen by reference to Appendix E, are of two kinds—those in which a specific kind of schooling is given with the aim of preparing boys to be skilled artisans, and those in which a supplementary education is given to those who have already commenced work.

The general opinion existing at present with regard to trade schools (sometimes called Monotechnic Schools) is crystallised in a report presented (Aug., 1898) by a member of the Board of Regents of the University of California to that University, in view of a proposal

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\* This course is intended only for those teachers and students who are willing to undertake the actual work, studying the subjects indicated and returning each quiz after having answered as many of the questions as possible. To those who complete a year's work satisfactorily a certificate will be given. This quiz was to be returned as soon as the first young toads begin to hop out of your aquarium and out of the ponds. This would probably be about the middle of June, perhaps later.

to establish a school "to teach boys trades, fitting them to make a living with their hands, with little study and plenty of work." The proposal was made to the Regents of the University by Mr. Wilmerding, and the school was to be styled the Wilmerding School of Industrial Arts.

The opinion of men prominent in industry in the State of California was first obtained. Of six such witnesses, five held the view that other than practical instruction should be given, stating that pupils should be fully instructed in the theory of the trade selected, also in the mathematics necessary for such trade; that scientific branches of education relating to the trade or industry should be given; and general information in the practical things of life. All agreed that pupils should be taught the use of *hand* tools to the fullest extent, and of machines so far as funds permitted. Almost unanimously these witnesses believed that it would be better that instruction should not be free, but that it would be more appreciated if a small charge were made, the only exception being in the case of children of poor parents. "I am afraid that the class of pupils most desirable to reach cannot be reached even by free instruction. Such a school could only reach those that most need its help by paying the pupils to attend," was one of the opinions expressed.

In answer to the question, What class of boys should have the preference in admission? the general opinion was that they should be boys belonging to working class families, such, therefore, as were likely to have to earn their living by manual labour. As to age of admission to the school, the average opinion was from fifteen to seventeen; though in view of the fact that after three or four years in the school the boys would still have to serve an apprenticeship, one witness advised admission to the school between the ages of twelve and fifteen, so that boys might not be more than seventeen or eighteen when they leave. There was practical unanimity with respect to leaving the choice of his trade to the pupil.

As to previous education to be demanded, there was no general agreement, two stipulated for a grammar school education (*i.e.*, in American terminology, an education extending over the eight years of the elementary school, the lower four being the "primary" and the upper four the "grammar" grades); the others would be content with less. One wrote: "As to the education of a boy learning a trade, education is not absolutely necessary to make what is called a good workman; but it is absolutely indispensable in making what is called a leading or master workman, or a workman with executive ability. However, a good, honest boy with intelligence will learn as rapidly while learning his trade as at any other time, and will pick out the more solid and substantial facts that bear on the trade he is following, and therefore a lack of education, if the boy has natural ability, should not prevent him from being admitted."

One of the witnesses added in a note: "The words 'little study and plenty of work' were evidently used by Mr. Wilmerding to



express his desire that some 'study' of a scientific character should be given; but that chief prominence should be given to the education of the hands to 'work,' so as to enable the scholar to earn a living for himself and his family by the intelligent use of his physical powers, and that to do this intelligently a certain amount of study (scientific) is necessary."

The University Board on November 17, 1896, passed the following resolution:—

*Resolved:* "That in the matter of the Wilmerding School, the Board of Regents will, in accordance with the purpose of Mr. Wilmerding, establish a school wherein boys shall, as far as possible, be taught trades by practical work."

In October, 1897, Mr. A. S. Hallidie, one of the Regents of the University, was authorised to visit eastern cities and schools for the purpose of getting information as to the best systems of organisation and equipment. Mr. Hallidie reported as follows:—

The resolution defined, as far as practicable, the character of the school to be founded and maintained under the Wilmerding bequest, hence, in my examinations, I confined myself to the class of schools coming nearest to the intentions of the above resolution.

Many of the manual training schools teach trades, but more incidentally than objectively. Many of them fit their pupils for the practical industries in a very thorough and complete manner, and from them are drawn the foremen, superintendents, engineers, architects, and mechanical experts, who are employed in great industrial enterprises, in charge of departments, or as consulting engineers, designers, etc.

Of trade schools, I visited the New York Trade School, founded in 1881, by Colonel Richard T. Auchmuty; the Baron de Hirsch Trade School, in New York, established 1894; the Master Builders' Mechanical Trade School, established 1895, in Philadelphia; and the Williamson Free School of Mechanical Trades, founded by Isaiah V. Williamson, of Philadelphia, 1888.

I have also taken the opportunity of talking with men closely connected with manual training, technical, and trade schools; with many manufacturers and mechanics, and with others engaged in the higher education.

My mission was to obtain information concerning the establishment and equipment of the Wilmerding School, so as to enable the Board to meet the wishes of Mr. Wilmerding, as understood by it: and, in carrying out the object of my visit, I found but three schools worthy of the name of trade schools, and whose functions are to teach boys trades fitting them to make a living with their hands, and which omit the higher branches demanded by technical and manual training schools.

While there seems to be a renewed interest in trade schools, and a general recognition of their value, there is by no means an unanimity of opinion as to how they should be conducted, in order to obtain the best and most economical results. The desired results, however, must be definitely determined in advance of the method of conducting the school.

All manual training schools are pretty much of the same type. Boys are taken at about twelve years of age. The mind and hands are trained together. The mind and intellect are carried educationally too far to make a contented and useful artisan and mechanic, and thus differ from what we understand as a trade school, where the purpose is to turn out journeymen mechanics, artisans, and artificers.

Many of the manual training schools, such as the Armour Institute, in Chicago, and the Pratt Institute, in Brooklyn, teach special trades or vocations; but their main purposes are of a much higher educational order.



Numerous as are the manual training and technical schools in this country, they do not yet supply the demand for the class of educated men and women they graduate ; which fact attests the excellence of their work and the great value of these schools, corroborated by the advanced position accorded by the civilised world to American engineers, constructors, etc.

But while the manual training school is more than its name implies, it is also more than we expect from a trade school. But to neglect the intellect in any *school* is utterly impossible, however much we may desire to confine ourselves to training the hands so as to make them useful in earning a living for their owner and his family in after life. Machines have become more useful than hands unintelligently directed, and more reliable, and the difference between some machines and some men is simply the intelligence of the man ; and even then, in some cases, the difference does not appear to be very great.

The trade school, as we desire it, is to take the place of apprenticeship, as we understand it ; and, in the substitution, to abolish the drudgery and waste of the latter, in the earnest and economical instruction of the former.

The need of such schools has long been admitted, and earnest workers have for years been trying to find a substitute for the old apprenticeship system, with results not entirely satisfactory.

I am not aware of a first-class shop in the country to-day that will take, except on probation, the graduates of a manual training or trade school. They have, in fact, to serve a sort of apprenticeship, when they enter the shop to work at the vice, lathe, or forge ; but that long period of degradation and drudgery, which as a rule the old indentured apprentice had to serve, is abolished by means of these schools, never to be reinstated.

A gentleman now at the head of Williamson Trade School, who served his time as painter with his uncle, declared that careful instruction for six months in the manipulation of the brush, gave the art—the mixing of colours being by rule and observation.

While in his judgment six months is long enough to teach the essential rudiments of that trade, he is of opinion also that two years is not too long to teach the essential rudiments of such a trade as that of machinist, and that in both cases, the after experience in the shop, in contact with finished mechanics and the experience of varied work, is necessary to round out and complete the education of the mechanic. This is also the opinion of all the foremen and superintendents of shops with whom I have conversed on this subject. And the question of the day, in this connection, is, Can this condition be mitigated or remedied ?

A study of the distinct methods employed by two trade schools, the New York and the Williamson, may throw some light on the question.

#### NEW YORK TRADE SCHOOL.

The purpose of the New York Trade School “ is to give instruction to young men in certain trades, and to enable young men already in those trades to improve themselves.”

The system of instruction here was originated by Colonel Richard Tylden Auchmuty, under which “ both the practical and theoretical branches of the trade are taught, so that not only is skill quickly acquired, but the scientific principles which underlie the work are also studied.”

Under this system young men have been enabled to learn the science and practice of certain trades “ expeditiously and economically, leaving speed of execution and experience *to be acquired at real work after leaving school.*”

Each student is placed under the care and guidance of a skilled and

experienced mechanic, and careful explanation is made of every step in the course. The student is shown how to hold his tools and how each piece of work should be done.

An opportunity is given the young man to determine if he has an aptitude for a certain trade, so that he may discover his unfitness promptly, and thus avoid the serious defect in the old apprenticeship system, where a boy was bound for years to a trade, fit or unfit, like or dislike.

Instruction is given day and evening, both or either, as the case may demand.

The day class, as a rule, begins at 8 a.m., and closes at 4 p.m. ; the evening class, 7 to 9.30.

Instruction is intensive and the term short, four to five and one-half months. Some few take a second term.

The age for admission is from 17 to 24, and it is the opinion of those best able to judge that none should be admitted younger than sixteen, and that they should possess a good physique, in order to withstand the physical strain due to the labour, even under careful supervision.

Fees sufficient only to cover the cost of material are made, and vary from 6 dols. to 16 dols. per term for the evening classes, and from 25 dols. to 40 dols. per term for the day classes.

There is a students' dormitory, where rooms are rented for 2 dols. per week. In this school nothing is made to be sold. No academic work is done ; neither reading, writing, or arithmetic is taught, except what is incidentally brought out during the lectures or explanation as the work progresses ; no machines are used, except a bender in the sheet-iron department.

The school has been designated by the City of New York as the Civil Service Examining Board for Candidates in Mechanical Work, and I saw about twenty men, of all ages, who were candidates, cutting stone, as masons, for work on city buildings.

The attendance of young men has averaged over 500 annually during the past five years, and since the school was founded 6,230 young men have attended the school. Applications are in excess of the capacity of the school, which is located on First Avenue, between 67th and 68th Streets, New York. The buildings are partly one story and partly three stories. The ground space occupied by the buildings is 58,040 square feet. Some of these buildings were constructed by the students, and in the vicinity are four-story brick buildings also constructed by them.

The trades taught in this school include bricklaying, plastering, plumbing, electrical work, carpentering, house painting, stone cutting, fresco painting, blacksmithing, printing, sign painting, sheet-metal cornice work, steam and hot water fitting, and drawing.

The trade unions accept the graduates as juniors, but require that they shall serve two years with a master mechanic, and shall be at least twenty-one years old before they rank as journeymen and get full wages.

There are trade school committees, consisting of master mechanics, who inspect the work done by the students.

The New York Trade School used to grant diplomas, but now grant certificates. The New York State law, recently passed, prohibits the granting of diplomas, except to those who have received a full collegiate course.

Horse-shoeing was formerly taught, in connection with veterinary science, in the school, but the State passed a law, at the instigation of the horse-shoers, requiring every young man to serve an apprenticeship before practising his art.

The New York Trade School had the benefit of Colonel Auchmuty's experience and personal direction during his life, and he lived to see his plan a success, when failure had been predicted.

The master builders of Philadelphia, through a committee, examined the New York Trade School, and have started in Philadelphia the **Master Builders' Mechanical Trade School**. It is so far only an evening school, and was started in 1890, on the plan of the New York school.

The age for admission is between 16 and 21 years.

The charge for the term is 27 dols., and the term is nine months.

Five evenings per week are required, two of which are occupied in actual work, and three in theoretical and scientific instruction.

"It is conducted on the principle of teaching thoroughly how work should be done, and leaving the quickness that is required of a first-class mechanic to be acquired *at real work after quitting the school.*"

Trades taught here are carpentry, bricklaying, plastering, stone-cutting, blacksmithing, painting, and plumbing.

#### WILLIAMSON FREE SCHOOL OF MECHANICAL TRADES.

The Williamson Free School of Mechanical Trades occupies a different place to the New York Trade School. It was founded by Isaiah V. Williamson, of Philadelphia, under a deed of trust, dated December 1st, 1888, and was opened October 20th, 1891; and has consequently been in operation over six years.

It is located about sixteen miles from Philadelphia, on a very pretty tract of 200 acres, and includes twenty buildings.

The deed of trust is very specific in its instructions, and, among other things, it provides that all scholars admitted to the school shall be bound as indentured apprentices to the trustees for such periods as the trustees may provide; but no indenture shall be for less than three years, nor extend beyond the minority of the scholar.

Scholars shall be fed with good wholesome food; plainly, neatly, and carefully clad, and decently and fitly housed and lodged.

If not properly educated, they shall be educated—a specification of which is given—but all with the end of being useful to them in the trade they are to learn, bearing in mind "the fact that the main object I have in view is to train young men to mechanical trades, so that they may earn their own living." . . . "Any higher or advanced knowledge which might render them dissatisfied with or unfit for their employments is unnecessary, and may be disadvantageous. I expressly direct that each and every scholar shall be compelled to learn and be thoroughly instructed in one good mechanical trade, so that when they leave the school, on the completion of their indentures, they may be able to support themselves by the labour of their own hands." The trades to be taught are enumerated. Mr. Williamson says: "I desire to have impressed on every scholar and inmate of the school that in this country every able-bodied, healthy young man, who has learned a good mechanical trade, and is truthful, honest, frugal, temperate and industrious, is certain to succeed in life, and to become a useful and respected member of society."

I have quoted thus from the deed of trust, as the language will convey more of the spirit of the founder, and better than I could express.

The amount of the endowment exceeded 2,000,000 dols. The amount in the fund after purchasing the site, erecting and equipping building, etc., is 1,500,000 dols. Scholars are admitted after a scholastic examination, covering reading, writing, spelling, arithmetic, including fractions and weights and measures, geography, United States history, composition and language. They must not be younger than sixteen, or older than eighteen, and must be natives of the United States. "And no one is accepted who is not able-bodied, intelligent, healthy, and possessed of a natural aptitude and liking for mechanical pursuits," and of good moral character. He must be provided with proper clothing when he enters the school, after which he is taken care of.

Each scholar is given a preparatory course in wood-working and mechanical drawing, with studies in the schoolroom extending six months, at the end of which period he is placed at one of the five following trades, the selection of which is made by the trustees: carpentry, pattern or cabinet-

making, brick-laying, including range-furnace and boiler setting, machine trade, in all its branches, steam and electrical engineering, steamfitting, etc.

The school and shops are in session eight hours daily on five days of the week, and four hours on Saturdays. About four hours class-room and four hours shop during the first year; the time in the shops gradually increasing towards the end of the apprenticeship.

The school term continues the whole year.

There is ample provision for recreation.

The discipline is quite strict. Scholars rise at 5.45, bathe, dress, and place their rooms in order. The school is divided into "families" of twenty-four, over which presides a mother, or matron, who is responsible for the boys' behaviour.

I never saw a better looking set of boys. They were at dinner part of the time I was there. I dined in the same room with them, and they passed in review before me as they filed out of the dining-room.

I found most excellent work, executed by the pupils, and some of the buildings on the grounds had been erected by them.

The shops are well equipped with modern tools and machines.

The young men who graduate from this school are probably better prepared to commence work as a journeyman than those graduates from any similar school; but the shops and the trades unions require that they shall have two years' actual experience in the shop, among experienced mechanics, before being admitted as journeymen and receiving their wages. They are, however, able to earn from 6 dols. to 9 dols. per week at the outset.

In examining the financial report for 1897, of the total expenditures, 58,444.36 dols., there were spent for board, lodging, and clothing pupils, and for house expenses, 33,619.82 dols.; for common school education, 4,349.62 dols.; for care, etc., of lands, 2,873.14 dols.—leaving for the mechanical education of 175 pupils 17,601.78 dols., about 100 dols. *per capita*. Total expense, per pupil, is 333.97 dols. per annum.

Mr. Hallidie also gives an account of the Baron de Hirsch Trade School, which is practically of the same type as the New York Trade School, and in summing up his impressions, with the proposed school in mind, he says:—

If the Wilmerding School is planned somewhat after the Auchmuty system, no expensive machinery will be required; if after the Williamson plan, a large investment in machines and apparatus will be necessary.

The man to take charge of the Wilmerding School should be an educated mechanic, with ability to teach. He should have had experience in some such institution as the proposed Wilmerding School, and have administrative ability.

I do not think we would care to carry out the Williamson plan; and the Auchmuty system probably should be modified to suit the conditions which exist here, and the character of the trades to be taught.

It must be borne in mind that no school has yet succeeded in turning out a mechanic ready to take up the work of a shop. This is acquired, however, in a short time after leaving the school.

It has, however, been proved to the satisfaction of those interested that a young man, by steady and assiduous work, by careful, concentrated, and intelligent attention to instruction given in an earnest, clear, and simple manner, by teachers who know more than they teach, and who are able to impart instruction from experience based on broad lines, can be taught the intricacies of manipulation in many trades in five and one-half months. There are trades, however, that will take three such terms, and the length of time should be graduated to the character of the work to be taught.

While in the school the pupils are more than anxious to learn, and consequently things are kept somewhat under high pressure by general consent. The age of the youths, sixteen up, and the good bodily health necessary for the physical labour required in such a school, enable them to endure eight hours' work for these short terms without mental and physical fatigue; the fatigue, in fact, is with the teachers.

The first catalogue of the new school has since been issued. The director states the aim of the school in the following words:—

The object of the Wilmerding School is to teach boys trades. Those in charge of it are seeking to carry out the wishes of Mr. Wilmerding as set forth in his will. The graduates of the school will be well instructed workmen in the trades which they select, and intelligent citizens.

The main work of the school will be manual instruction in the trades, but with that will be given the drawing and mathematics required by a first-class workman, such training in English and business forms as will enable him to transact his business properly, such portions of geography and history as are most intimately associated with the development of the mechanical arts, and such knowledge of the history and principles of our Government as a good citizen should possess.

In the mechanical, as well as the academic, departments the methods of instruction will be based upon approved pedagogical principles. Experience has shown that there is no better way to develop solidity of character and the ability for self-support than by a reasonable amount of academic study combined with a thorough training in the handling of tools and material. The mechanical work will not be expended on toys to be thrown away, but on useful objects of commercial value.

The instructors in the school are all masters of their trades, and have been selected from among the best workmen in the country. The work in the shops will differ from that in the best commercial shops only in that the main effort of the foremen, who are instructors, will be to turn out good workmen rather than to keep down the cost of good products.

The aim will be to thoroughly equip the students not only in the shops but in the academic departments, and graduate young men who will be mentally, morally, and physically able to go out and help to ennoble and enlighten labour, and at the same time earn a workman's wage.

The full course will cover a period of three years, and certificates will be issued to graduates which will show that the holders of them are able to fill positions.

The curriculum is as follows:—

#### SHOP-WORK.

Carpentry, Cabinet-Making, Wood-Carving, Bricklaying, Plastering, Plumbing, Blacksmithing, Stone-Cutting, and Clay-Modelling.

#### ACADEMIC AND SCIENTIFIC WORK.

English, history, geography, arithmetic, principles of art, design, mechanical and architectural drawing, freehand drawing, algebra, geometry, trigonometry, and theoretical mechanics.

#### EQUIPMENT.

The equipment of tools, machinery, and appliances is complete. All the shops are fitted and equipped with the best of everything in this line and arranged according to the latest shop methods. No expense has been or will be spared to make this the best-equipped school in the country.

## SCHEDULE OF PRELIMINARY COURSE (WILMERDING SCHOOL, SAN FRANCISCO).

MONDAY.						TUESDAY.					WEDNESDAY.					THURSDAY.					FRIDAY.				
SECTION	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
A.M.																									
9 to 9.45	Dr	A	Eng.	Math.		A	Dr	Eng.	Math.		F H	Dr	A	Math.		F H	Dr	A	Math.		Dr	A	Eng.	Math.	
9.45 to 10.30			Math.	Eng.				Math.	Eng.		A	Dr	Eng.						Eng.				Math.	Eng.	
10.30 to 11.15	Math.					Math.					Math.	Eng.				Math.	Eng.				Math.				
11.15 to 12	Eng.		A	Dr	F H	Eng.		Dr	F H	A	Eng.	Math.				Eng.	Math.				Eng.				
LUNCH																									
SECTION	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
P.M.																									
1 to 2.30	Cr	Cr	Bl	Cp	CB	Cr	Bl	Cp	CB	CB	Bl	Cp	CB	Cr	Cr	Cp	CB	CB	Cr	Bl	CB	Cr	Bl	Cr	Cp
2.30 to 4			Bl	Cp	S	Bl	Cp	S	CB	Cr	Cp	S	CB	Cr	Bl	S	CB	Cr	Bl	Cp	CB	Cr	Bl	Cp	S

## LIST OF ABBREVIATIONS.

A.—Art.	CR.—Card Board Geometry.	F H Dr.—Freehand Drawing.	Eng.—English History and Geography.
Bl.—Blacksmithing.	Cp.—Carpentry.	Dr.—Mechanical and Architectural Drawing.	Math.—Mathematics.
Cb.—Cabinet-making.	Cr.—Carving.		S.—Study Period



## PRELIMINARY COURSE.

The preliminary course of five months includes the following branches of academic and shop work :—Mathematics, English, geography, freehand drawing, mechanical and architectural drawing, art and design, carving, cabinet-work, carpentry, and blacksmithing.

The object of this course is to not only give all pupils this general training, but to give them an opportunity of finding out what lines of work they are best fitted for and would like to follow as a trade.

The graduates from this course follow their particular trade and continue those subjects which are necessary and closely allied to their chosen work.

The three-year course is not yet made up, as the framing of it will depend largely upon the results of the first five-month course.

At the beginning of the school year in July, 1900, the departments of bricklaying, plastering, and plumbing will be added and carried along in a thorough manner, but will not be included in the five-month course.

## (V.) TRUANT AND REFORM SCHOOLS.

The way in which penal schools and schools for incorrigibles are being made contributory to the industrial spirit of the boys and youths sent to them need only be referred to in a single word. The writer visited several such schools, and, in addition to the George Junior Republic, described in an appendix to the report on "Moral Education in American Schools," was greatly struck with the work at the Sockanosset School for boys, where the deputy-superintendent goes right into the forge and workshop with the youths, and by dint of the discipline of labour and of a helpful intercourse, sets many upon an industrial career. The Oaklawn School for girls does similar work. Good work was being done at Rainsford Island, Boston, and also at Thompson's Island in the same bay. To what is said in the earlier report upon the disciplinary side of the best American schools of this type, must here be added the impulse of work and the outlook towards an honourable industrial career.

## (VI.) SUMMARY OF IMPRESSIONS.

One or two suggestions arise out of the present paper. These appear with some clearness to be :—

(1) Education throughout should have an outlook towards life; having a regard, not to forcing the interests, but to the steady all-round growth of the future worker. The more education is life, the better it prepares for life.

(2) This outlook towards life, and any education which corresponds with it, would seem to imply the training of the manual powers—one might almost say the manual *intelligence*—of every citizen.—[See Appendices B (III.) and C.]

(3) Early and continuous hand-training is an educational necessity as well as a utilitarian and time-saving expedient. A

school course, following upon the admirable beginnings of the well-balanced kindergarten, which trains hand as well as brain, makes it possible in later and more technical education to develop brain as well as hand, and so to train a more intelligent and highly-skilled worker. In so far as the child's doing is made to accompany his learning, will it be more possible for learning to accompany the industrial student's doing.\*

(4) The moral reasons for some form of manual training throughout the school course are almost as strong as the intellectual and the industrial.

Further, a large part of the value of the education of the hand resides in the temper of mind and quality of spirit which it helps to develop. It is not merely a question of supple fingers habituated to useful or graceful movements, all working in harmony with eye and arm under the guidance of some thought; it is also the cultivation of a practical attitude which, possessing us almost unconsciously, silently fortifies for the after working-days of life and helps to give a sense of mastery and preparedness in dealing with practical issues.

(5) The teacher is the agent in all education; yet it is quite possible that a teacher may seem to work harder (and may actually work harder so far as physical and nervous wear and tear are concerned), and really *do less* than if, instead of endeavouring to make himself a substitute for a book, he were content to stand to his class, and to the individual members of it, in the human relation of leadership and captaincy. The art of the teacher is the art of making the most of his pupils. (See pp. 105, 107, 111, 147-150, 155-158, 177.)

(6) The sociological *motif* which has been spoken of in the reports on *Individuality and the Moral Aim in American Education* and *Moral Education in American Schools* extends also to questions of industrial education. (See Appendix E, and page 208.)

(7) The question, Does a college education pay? has for its answer, It depends on the college and the education; that is, upon the teachers *quâ* their faculty of training men in addition to their grasp of subjects, and upon the effectiveness and appropriateness of the courses of study offered.

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\*Even though the Report of the Committee of Fifteen, quoted on page 126, may be right in saying that from 11 to 12 is early enough to commence woodwork, yet a great number of pupils never reach the seventh and eighth grades which quick children sometimes reach at this age. And it is precisely these pupils who will, as a rule, enter the ranks of the manual workers, and for whom, from one point of view of the relations between education and industry, the opportunity of manual training and development during school years is eminently desirable. Nor need older backward children be kept to the simpler forms of hand-work of the lower grades.

For fuller information upon the subject of this paper reference may be made to the Reports of the United States Commissioner of Education, especially to the report for 1897-98 ; to the monographs prepared for the Paris Exhibition, especially numbers 4, 11, 12, 13, 14 ; to Mr. Vice-Consul Erskine's report on " Education in Chicago " ; to Mr. J. H. Reynolds' report of a " Visit to Technical Colleges, etc." ; and for special phases of the subject to Mr. H. O. R. Siefert's report presented to the Milwaukee Board of Education, 1899 ; to Professor Dewey's book, " The School and Society " ; and to the 1900-1 prospectus and statement of the Ethical Culture Schools, New York. On the subject of agriculture, attention should be given to the admirable university extension work done by Cornell University, and to the references to Arbor Day, etc., in the reports of the Superintendent of Public Instruction for the State of New York.\* Reference should also be made to the articles on Commercial Education and on the Education of the Coloured Races in this Volume.

July, 1901.

H. THISELTON MARK.

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\* See also *Educational Foundations of Trade and Industry*, by Fabian Ware ; pp. 259-285 ; and *Commercial Education at Home and Abroad*, by Hooper and Graham (reference to Schools of Commerce). Mr. J. H. Reynolds' Report is published by Henry Blacklock and Co., Albert Square, Manchester (Price Sixpence).

## APPENDIX A.

## EDUCATIONAL ASPECTS OF MANUAL TRAINING.\*

Manual training is no longer an experiment. According to Commissioner Harris's Report of 1893-1894, it had been tested at that time in the United States in the public schools of ninety-five cities and towns, in forty-nine institutions of collegiate grade, in nineteen normal schools, and in seventeen special manual training schools. Since it is not compulsory upon institutions to furnish statistics, these numbers fall short of the actual extent of the work. It can be safely stated, however, that wherever this training has been established, it is in a healthy, growing condition, steadily rising in popular appreciation, proving its value as an efficient educational factor, not only in the development of manual skill, but also in the enrichment and invigoration of the intellect, in the direction and strengthening of the will, in the establishment of a healthy moral attitude, and in the nurture of public spirit.

It is the testimony of careful observers that the addition of manual training to the curriculum of schools operates as a great time-saving in the so-called purely intellectual studies. This applies with equal force to the kindergarten, the manual training school proper, and the industrial schools, in which children devote only one-half of the day to the ordinary school studies. Dr. Harris reports that the addition of the kindergarten to the public schools of St. Louis represents a saving of more than a year of ordinary schooling to each child concerned. Similar testimony comes from Philadelphia, Milwaukee, and a dozen other cities. Dr. MacAlister testifies that in the Philadelphia manual training school, students learn in the three years course of the institution as much of history, English and literature, German, and bookkeeping as others do in other parallel high school courses; and a great deal more of science and mathematics, including geology, physics, chemistry, physiology, mechanics, steam engineering, applied electricity, geometry, algebra, and trigonometry; in addition to drawing, designing, and modelling, and the regular courses in joinery, pattern-making, wood-turning, wood-carving, modelling, forging, soldering, moulding and casting, vice work, and mechanical construction.

Such results seem almost incredible to one unfamiliar with the laws of mental development, or to a mind whose powers of perception in this direction have become clouded by the misty scholastic mediævalism of the traditional school. In the light of modern psychology and child-study, however, the solution of the matter offers no serious difficulties.

A most interesting observation came to me during my administration of the Indian schools of the nation. These schools are not establishments for the mere acquisition of the three-R accomplishments of the ordinary public school. They are meant to be all-sided, civilising agencies for the uncivilised red children of plain and forest. They are to these children not only school, but also home and community, and, in a measure, even church, or, at least, Sunday-school. They touch every phase of life. Consequently, their character is, to a large extent, domestic and industrial. Girls are taught the arts of home-making, and boys the arts of community-making. For this reason only three hours a day can be devoted to school-room work. The remainder is given to the domestic and industrial interests of the institution, cooking, sewing, laundering, nursing the sick, care of rooms, etc., on the part of the girls; to farming, care of stock, tailoring, shoemaking, carpentering, blacksmithing, and other indispensable shop work, on the part of the boys.

This would naturally lead to the inference that the progress of the children in the three-R studies must be unsatisfactory. The inference would be

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\* From an address recently delivered before the Present Day Club, of Dayton, Ohio, by Dr. W. N. Hailmann.



**2. Strings of Beads.**

Conversations about size and measurement, using expressions "largest" and "smallest."

**3. Spheres of same size as Model.**

Comparisons, children using expressions, "is equal to," "are equal to," "equals" and "equal."

**4. Pyramid Building** with spheres of clay, each child contributing.

Expressions used in conversations: my sphere, your sphere, our spheres, his sphere, her sphere, ; bring, brought, have brought, has brought ; build, built, has built, have built ; make, made, has made, have made, etc.

**5. Cubical Building Blocks.**—(The Cube.)

Represent the greatest possible variety of cubical objects, *e.g.*, building blocks, cubes of sugar, caramels, cubical boxes, baskets, etc.

Compare with solid cube, using expressions, "larger than cube," "smaller than cube," etc. ; *e.g.*, My . . . is smaller than the cube ; John's . . . is larger than the cube.

**6. Cubes of same size as Model.**

Conversations as previously suggested. (See I., 3.)

**7. Building Exercises**, each child contributing a cube.

Conversations as previously suggested. (See I., 4.)

**II. PAPER FOLDING BASED ON SQUARE.**

(For valuable general suggestions relating to Paper Folding, see New Edition of Prang's Manual of Art Instruction. First Year, pp. 76, 77.)

**Book Cover.** (For booklet of dictations to be taken home.)

**Materials:**—An eight-inch square of paper, several sheets of tablet-paper (No. 2 or No. 3), needle and worsted.

Fold a sheet of tablet-paper to form a little book and show it to the children ; suggest that each child similarly fold some sheets of tablet-paper into a little book for dictation lessons ; that each make a book-cover for his own book ; ask what shape it would have to be.

**Directions for folding book-cover:** "Lay your square directly in front of you ; hold it with your left hand ; pass the fore finger of the right hand along the edge near to you ; along the edge farther from you. Fold the nearer edge over to the farther edge ; see that the edges are exactly together ; now crease the fold. Take up your paper ; open it ; you have a little book cover."—(From *Prang's Manual*.)

Lay book cover on desk with fold toward you. With solid cube, measure two inches on crease from lower right corner, and place tiny dot with pencil. Repeat from lower left corner.

Place the folded leaves of the book inside the cover so that top and bottom margins are equal. Open to middle of book. Measure with solid cube on crease, two inches in from top of cover, and place tiny dot for stitch. Repeat, measuring from bottom of cover.

Thread needle with worsted. Draw threaded needle through upper pencil dots, from the outside to inside, and back to outside through lower pencil dots. Use double threads for stitch, and tie in double bow knot in back.

Then follows a number exercise based on measurements, and relations of parts, of book cover.

**III. CLAY MODELLING OF FRUITS AND VEGETABLES.**

(In Connection with Nature Study.)

Apples, Pears, Nuts, Carrots, Potatoes, Onions, etc.

**IV. CLAY MODELLING OF CYLINDRICAL TOYS AND CYLINDERS.**

**1. Cylindrical Toys.**—Greatest possible variety of cylindrical objects, as drums, fire-crackers, sticks of candy, cylindrical boxes and bottles, music rolls, etc.



Conversations expressing results of comparison with cylinder and with each other as previously suggested in comparisons of spheres and cubes.

2. *Cylinders of same size as Model.*

Conversations as previously suggested. (See I., 3 and 6.)

3. *Building, each child contributing a cylinder.*

As they build, children and teacher may repeat appropriate lines, *e.g.* :—

I shall build a castle so,  
With a gateway broad and grand.  
Here an ivy vine shall grow,  
There a soldier guard shall stand ;  
And the tower shall be so high  
Folks will wonder, by and bye.  
\* \* \* \* \*

Here a gate and there a wall.  
Here a window, there a door ;  
Here a steeple, wondrous tall,  
Riseth ever more and more.

*Eugene Field.*

## OCTOBER AND NOVEMBER.

### I. BUILDING EXERCISES WITH SQUARE PRISMS.

The building should be preceded by conversations about faces, edges, corners, measurements, and proportions. (*Art Instruction, First Year, Chapter III.*, contains valuable suggestions for building and arranging.)

As children build, teacher and children may repeat appropriate lines, *e.g.* :—

What are you able to build with your blocks ?  
Castles and palaces, temples and docks.  
Great is the palace with pillar and wall ;  
A sort of a tower on the top of it all ;  
And steps coming down in an orderly way  
To where my toy vessels lie safe in the bay.

*R. L. Stevenson.*

Rain may be raining and others go roam,  
But I can be happy in building at home.

### II. PAPER FOLDING, CUTTING, AND PASTING.

Making market baskets, harvest bins, barns, tablecloths, and napkins ; with accompanying number exercises.

### III. BUILDING WITH SQUARE PRISMS AND RIGHT-TRI PRISMS.

*Pigiron (India) — A Pigiron Village.*

(*Conversation* : What would you like to call this village ? What story have you read or heard that tells about the inside of the houses of the pigiron ?

*Teacher answers.*

What words did you use ? What shape is the end of the lower part of the house ? The front ? The side end ? The front of the roof ? Tell how you build the house, using words above, below, on, under. Compare size of "gable end" with that of end of first story. Compare length of rafters with length of roof ; length of ridge-pole with eave. Call any one of these a certain length, and tell what length of others would be.

### IV. PAPER FOLDING AND PASTING.

Little Round Shoulders's mother probably wore a handkerchief around her shoulders and a large apron. These objects are made in paper.

NOVEMBER AND DECEMBER.

I. ARRANGING CONES.

1. *Indian Village.*

Arrange solid cones to form Indian village.

II. PAPER FOLDING, CUTTING, PASTING, AND SEWING.

1. *Indian Tepees.*

Make Indian tepees of paper by developing pattern of cone. Wrap solid, creasing edge, cutting and pasting. Door of tepee may be made by slashing, and folding flaps back.

2. *Indian Canoe.*

Material, a sewing card (not outlined for sewing). Processes: bisecting edges, drawing diameter, cutting, etc.

Thus are formed the two sides of the canoe, which may be decorated in bright colours if desired. Fasten the two sides together by sewing "over-hand" with bright worsted.

3. *Indian Canoe.*

Teacher may draw on board pattern of canoe and paddle, children drawing pattern freehand, from teacher's model, then cutting and sewing sides together as indicated above.

4. *Indian Canoe.*—(Paper folding.)

Material, eight-inch square of paper.

Fold two diameters, making four-fold square. Place on desk so that open edges are at the left and top. Take three thicknesses of paper at upper left corner. Fold down to meet lower right corner. Crease firmly. Turn square over. See that upper right corner is one thickness of paper. Fold upper right corner to meet lower left. Crease firmly. You have now a pointed hat. Open folded edges slightly, and place on thumb. Bring together the front and back points of the hat. The folds thus made are to be creased flat. You now have a folded square. Hold with open edges of the square toward you. Pull left half away from right half. Find apex of the triangle left in the centre of the canoe. Fold to middle of base.

5. *Moccasins.*

Materials, sewing cards, not outlined for sewing.

Teacher may prepare patterns for sole and upper part of moccasins. Children may lay patterns on cards, draw around and cut. Designs may be marked and sewed on heel and toe, and the two parts fastened together with worsted.

III. HOME WORK.

Materials, whalebones, steels, strings, feathers, scraps of cloth, leather, bits of wood, iron, etc.

Encourage children to make at home and bring to school, "linden cradle," cradle in which papoose is carried on the mother's back, articles of Indian dress, Indian head gear, tomahawks, war clubs, bows and arrows, etc.

IV. PAPER FOLDING, CUTTING, PASTING, AND SEWING.

1. *Christmas Gifts.*—(Made with sewing cards.)

Sewing cards Nos. 9 and 10, and Nos. 11 and 12, are suggested as especially suitable for making shaving cases, blotting pads, Christmas portfolios, Christmas booklets, calendars, etc.

2. *Cornucopia.*

Material, eight-inch square of paper.

Place square on desk turned. Lap right edge over left. Paste. Add oop to hang. (Loop may be of ribbon.)

### 3. *Hanging Basket—Four Cornucopias.*—(For Christmas tree.)

Material, eight-inch square of paper.

Place square on desk facing. Fold and crease diameters. Bring together outer ends of diameters to form four cornucopias. Add loops for hanging, tassels for ornament, etc. (This may be used for matches.)

### 4. *Cubical Basket.*—(For Christmas tree.)

Material, eight-inch square of paper.

Fold square into nine small squares, as follows: Place square on desk facing. Fold lower edge up until part left is equal to part folded. Crease firmly. Turn half way around. Fold upper edge to meet lower folded edge. Unfold.

Place square on desk so that creases extend from back to front. Fold thirds as before. Crease firmly. Place square facing. Cut along creases separating squares in lowest row. Repeat on upper row. The centre square of the original nine squares is the bottom of the basket. Arrange the other squares at right angles with this square as base, and paste to form cubical basket. Cut and paste strip to form handle.

*Conversations involving Number Relations are Interspersed.*

### 5. *Lantern.*—(Christmas tree ornaments.)

Material, square of coloured paper.

Place square on desk facing. Fold one diameter. Turn half way around. Fold up lower edges one half inch. Crease. Open. Begin at folded diameter and cut in one eighth inch strips, cutting to the crease each time. Open square. Bring edges together, and paste to form a lantern. Cut and paste strip to form handle.

### 6. *Pen Wipers.*—(Christmas gifts.)

Children may bring scraps of bright-coloured cloth. Cut in circles, triangles, squares, etc., and fasten together with worsted.

## JANUARY.

Measurement by rule is introduced in the following exercises. The "articles made" involve conversations about the sun, moon, stars, sunshine, clouds, rain, snow, direction of wind, and the colours of the spectrum. (See leaflets and topics for General Lessons, also *Hiawatha Primer*, pp. 50 to 74.)

### 1. *Foot Ruler.* (To be used in the following exercises.)

**Materials and Tools:** Strips of bristol board, 1 ft. by 1 in., inch-square tablet, lead pencils.

**Directions:** Place strip on desk with long edges from back to front. Lay tablet on strip so that upper edge of tablet coincides with upper edge of paper. Draw horizontal line across strip at lower edge of tablet. Again, lay tablet on strip, so that upper edge of tablet coincides with line just drawn, and draw horizontal line across strip at lower edge of tablet as before. Proceed similarly until strip is divided into twelve square inches.

Lay rule on desk with short edges from back to front. Number lines, 1, 2, 3, 4, 5, etc., to 12—from left to right—placing neat figures close to lines and upper edge. Place 12 in upper right corner.

*Number Exercises, involving relations  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{3}{4}$ .*

### 2. *Daily Calendar for January.*

**Materials and Tools:** 9 by 12 white drawing paper, foot-ruler just made, and pencil.

**Directions:** Lay foot ruler on paper, both on desk with long edges from left to right so that upper edges coincide. Place points on upper edge of paper to mark off inch spaces as indicated by the rule. Similarly, mark off inch spaces on lower edge of paper. Connect opposite points with very light, ruled vertical lines, thus marking off twelve oblongs 1 in. by 9 in. Turn paper around, and repeat on short edges, thus marking off entire paper in square inches.

Show what lines mark off a section 7 in. by 8 in. Cut along these lines, thus removing section. Place section on desk with long edges from back to front. Line in all horizontal lines, and all vertical lines from lower edge to upper horizontal line. On the upper horizontal line, write the word "January," and the figures designating the year. In the square-inch spaces just below write the abbreviations for the day of the week. In the next row of spaces, place a small figure 1 in the lower left corner of the proper space, and similarly number spaces from 1 to 31—from left to right.

Each pupil may keep his calendar in the desk, and each morning he may draw in the space for the day, the shape of the moon as seen the previous evening, if visible. At the discretion of the teacher, other records may be kept, showing conditions of weather (sunny, cloudy, rainy, stormy, etc.), direction of wind, temperature, etc.

Appropriate poems may be recited, as calendars are marked. (*See Leaflets.*) The New Moon (Song); Lady Moon, Lady Moon (Song); Sunshine (Song); Twinkle, Twinkle, Little Star; Have You seen the Pretty White Boat; The Sunbeams; Selections from Hiawatha.

"Whether fair, whether foul,  
Be it wet or dry.  
Cloudy time, or shiny time,  
The sun's in the sky.

Gloomy-night, sparkle-night,  
Be it glad or dread,  
Cloudy-time or shiny-time,  
Stars are overhead."

"Whichever way the wind doth blow,  
Some heart is glad to have it so."

"The skies may meet in sadness,  
The blustering winds may blow,  
But if our hearts are cheery,  
There's sunshine where we go."

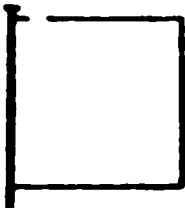

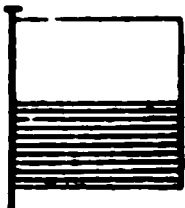
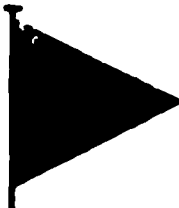
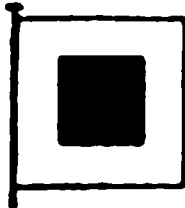
"Yet overhead more near  
The eternal stars appear."

As the general topics for the month include the sun, moon, and stars, such stories as those found in leaflets will be read or told, and reproduced.

### 3. Flag Signals.

Materials: Six-inch sticks, and sheets of black, white, and blue paper. See that squares and triangles are cut without waste of paper, and lay aside sheets for future use.

#### EXPLANATION OF FLAG SIGNALS.

No. 1.	No. 2.	No. 3.	No. 4.	No. 5.
				
FAIR WEATHER.	RAIN OR SNOW.	LOCAL RAIN OR SNOW.	TEMPERATURE.	COLD WAVE.

#### Interpretation of Displays.

- No. 1, alone, indicates fair weather.
- No. 2, alone, indicates rain or snow.
- No. 3, alone, indicates local rain or snow.
- No. 1, with No. 4 above it, indicates fair weather, warmer.
- No. 1, with No. 4 below it, indicates fair weather, colder.
- No. 2, with No. 4 above it, indicates rain or snow, warmer.
- No. 2, with No. 4 below it, indicates rain or snow, colder.
- No. 3, with No. 4 above it, indicates local rain or snow, warmer.
- No. 3, with No. 4 below it, indicates local rain or snow, warmer.

These may be made of required dimensions to be measured with ruler No. 4 may be first obtained by marking around base of equi-tri prism, that children may see development of triangle from triangular prism.

The following summary is taken from the report of the Minneapolis Board of Education for 1899 :—

#### INDUSTRIAL WORK RELATED TO OTHER STUDIES.

(Following a topic are named the subjects to which it is related.)

*Aims.*—Development of the child.

Development of the Thought. “A thought is only half a truth, until expressed in action.”—*Emerson*.

#### FIRST GRADE.

Modelling in the round of familiar and type forms. (Drawing and Number.) Paper-folding, and making of simple objects, from dictation and by development. (Drawing, Number, Literature, Nature Lessons, History.) Block-building. (Draw., Num., Lit., Hist.) Paper Cutting, and making of simple objects, for illustration of stories and incidents. Cutting of faces from solids for study of proportion. (Draw., Num.) Modelling, cutting, pasting, folding. (Num.) Stick laying. (Num., Nat. Less., Hist., Lit.) Cardboard sewing of geometric forms, designs, borders, etc. (Draw., Num.)

#### SECOND GRADE.

Modelling by up-building. Making of hollow type forms and simple objects from paper. (Draw., Num., Lit., Nat. Less., Hist.) Block-building. (Draw., Num., Lit., Hist.) Story telling with the scissors.\* (Lit., Nat. Less., Hist., Draw.) Cutting of faces to introduce views, and for study of proportions. (Draw., Num.) Historic decorative forms folded by dictation and cut. (Hist., Draw., Num.) Cardboard sewing of geometric form, designs, borders, etc. (Draw., Num.) Modelling, making, paper folding, cutting, pasting. (Num.)

#### THIRD GRADE.

Modelling continued. (Geog., Hist., Lit., Nat. Less., Num.) Development of patterns of type solids. (Draw., Num.) Block-building and paper cutting for illustration. (Related as in previous grades.) Continued study of relation of parts and of proportion, by cutting and by proper arrangement of faces. (Draw., Num.) Decorative arrangements of geometric shapes cut from paper, placed to form borders and rosettes. (Draw., Hist., Num.) Cutting and pasting. (Lit., Hist., Nat. Less., Geog., Draw.) Making of paper, cloth or wood. (Geog., Lit.) Sand modelling. (Geog.) Paper folding. (Num.) Sewing. The Supervisors of Sewing and Drawing have in preparation a series of lessons, providing for the making of simple, useful articles of cloth, decorated with suitable designs. (Not yet in use.)

#### FOURTH GRADE.

Patterns developed, cut and pasted. (Draw., Num.) Cutting and arranging rosettes, borders, and forms of historic ornament. (Hist., Geog., Draw., Num.) Block-building. (Related as in previous grades.) Sewing and Sloyd. (A systematic course in each begun in this grade. See Course in Sewing and Course in Manual Training.)

#### FIFTH GRADE.

Models and objects made from paper patterns. (Draw., Num.) Cutting of views. (Draw.) Freehand Drawings. Working Drawings. (Draw., Num.) Conventional flower forms cut and pasted. (Draw.) Historic forms cut. (Hist., Geog., Draw.) Block-building. (Related as before.)

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\* Free-hand and paper-cutting. This is excellently done in many American schools.

**SIXTH GRADE.**

Use of instruments in making patterns of geometric solids and simple objects. (Draw., Num.) Conventional leaf and flower forms cut. (Draw.) Moorish ornament cut. (Hist., Geog., Draw.) Block-building. (Related as before.) Working drawings. (Draw., Num.)

**SEVENTH GRADE.**

Pattern making with instruments, of type solids and simple objects. (Draw., Num.) Egyptian ornament, vases, etc., cut. (Hist., Geog., Draw.) Block-building. (See above.) Working drawings. (See above.) Cooking. (See Course in Cooking. Note relations to Health Lessons.)

**EIGHTH GRADE.**

Making of frustum of prisms, pyramids, etc., from patterns. (Draw., Num.) Greek and Roman ornament cut. (Hist., Geog., Draw.) Conventional leaf and flower forms cut and arranged. (Draw.) Block-building. (Related as before.) Working drawings. (Draw., Num.)

**APPENDIX B.—(II.)**

The following is taken from the Course of Study for the **Dayton** public schools for 1899–1900:—

**FORM-WORK.****GRADES I. AND II.**

Recognition, construction, and use in geometrical designs of the cube, cylinder, sphere, prism; of the square, oblong rectangle, lozenge, triangle (equilateral, isosceles, right), hexagon; of the circle, half-circle, fourth-circle (quadrant); diagonal, diameter, centre, radius; of parallel, diverging, oblique, perpendicular, horizontal, vertical, slanting directions; of right, obtuse, and acute angles.

Materials to be used in this work: Clay, sand, blocks, tablets, sticks, folding-paper, paper-strips, drawing material. Colouring with crayon, pencil, or brush in geometrical designs.

**GRADES III. AND IV.**

Recognition and construction of prisms, pyramids, cones, and spheroids; of the rhomboid and octagon. Analysis by cuts parallel to the axes of the cube, cylinder, sphere, of prisms and pyramids. Analysis of triangles by "altitudes," of polygons by diameters and diagonals, and of the circle by diameters and other suitable chords.

The material to be used is the same as in the previous circle, with the addition of the school compasses.

The inventive exercises in geometrical designs must be supplemented with suitable oral and written exercises in the description of forms.

**GRADES V. AND VI.**

Simple exercises in geometrical drawing with applications in designing in accordance with the "Fifty Problems" issued by the Superintendent of Instruction.

Preparation and use of the protractor and systematic study of directions and angles. (Not before second half of circle-period.)

[Construction, from cardboard, of geometrical solids, cubes, prisms, pyramids, cylinders, cones, and derivative forms.



## GRADES VII. AND VIII.

Chapter XVI. of Walsh's Grammar School Arithmetic, Part II.

Construction, from cardboard, of models illustrating rules of mensuration (areas and volumes of geometrical forms), the construction of the squares and cubes of numbers of two digits, and, *vice versa*, the extraction of square and cube roots.

## APPENDIX B.—(III.)

The superintendent of schools, Washington, D.C., said in his report for 1896-97:—

MANUAL TRAINING BETWEEN THE EMPLOYMENTS OF THE KINDERGARTEN  
AND THOSE OF THE TOOL LABORATORIES OF THE GRAMMAR SCHOOLS.

[Taken from the Annual Report, 1890-91.]

It was a comparatively easy task to project plans for giving instruction in sewing, cooking, and tool laboratory employments. It was not difficult, the financial means being assured, to provide and arrange appliances and practically to put the work into the respective grades of the school. It was seen, however, at the start, though much might be done by the introduction of the employments named, to give to some of the children valuable training in the use of the eye and hand and a profitable acquaintance with practical things, that such a course would be unsymmetrical; that it would postpone the beginning of some kinds of muscular training too late for the most profitable returns for a given expenditure of effort; that it would omit entirely some lines of desirable training because of its narrowness, and that children withdrawing from the school during the early years of the school course would get little training of the kind we were seeking to give them.

It was felt that a year or two of primary kindergarten work at the beginning of school life and a corresponding amount of shop and laboratory work at the close would not develop to a very high degree that accuracy of perception, deftness of hand, and trustworthiness of judgment in application that a child's school training should give to him.

It was believed that the gap between the sense-training of the kindergarten and the use of carpenters' and metal workers' tools in manual training shops should be filled by a system or course of hand work in the school-rooms running parallel with the purely mental studies of the curriculum of the same grades; that such a course should by its many and varied employments develop the eye, the hand, and the judgment in the direction of expertness, facility, and reliability; that definite, measurable results in skill, ingenuity, and in continuity of effort for the accomplishment of purpose should be the aim of all teaching in this course of work, and that such a course, if practicable, would be in the interest of economy.

Since the beginning of manual-training exercises in our schools, therefore, efforts have been made to arrange some practicable lines of hand work that should begin in the first primary grade and lead sequentially to the employments of the laboratories of the seventh and eighth grades for the boys, and that should be equally profitable to the girls, who would be instructed in cooking when reaching the same grades.

Drawing was at the time mentioned a branch of instruction in the schools. It was determined that the subject could not be taught well from flat copies.

It was known, though we had not been able previously to the time to which reference is made to direct the work of drawing in the light of our

best knowledge, that only by a liberal and an intelligent use of objects by which children could be made acquainted with natural and art forms could drawing be successfully taught. It became more evident every day, as the work of teaching drawing was studied, that representation could proceed only from an accurate knowledge of the facts, for, however appearance of forms might differ from the facts, the underlying causes of the differences could be understood only by him who had been made acquainted with the facts.

Furthermore, when contemplating the purposes of the study higher than those of simple representation, it was believed that as a healthy productive imagination could be cultivated only after there had been acquired a store of facts well understood, so artistic work could be done by him only who would fashion his art out of materials taken from his own conscious storehouse of facts whose relations were understood.

It was agreed, therefore, that if the child is to be taught drawing at all, no matter for what purpose, first of all the teacher must see that he has abundant opportunity to learn from facts, and that as in the study of spoken or written language, so in his study of drawing or of graphic language, he must be made to know before an attempt is made to teach him expression. An important step forward in the teaching of drawing was made when this almost axiomatic truth was recognised.

It was believed also that facts could not be learned from representation or from dictation, or from both.

Children learn to know forms only imperfectly by seeing them and handling them. They get correct permanent conceptions of forms best by analysing them and by putting them together, and by making them of different sizes and of different materials and under different circumstances and for different purposes.

Form study requires the action of one set of nerve centres excited by the eye co-operating with other sets of nerve centres excited by muscular action of fingers and hands, directed by the will, for the establishment of correct, permanent concepts of form. Concepts are built.

Form study and drawing are sequential steps in the order named for beginners, form study being the first, drawing being the second. Form study is a prerequisite to drawing. Manual training is one of two co-ordinate parts of form study. Manual training, then, and drawing are as inseparable as are ideas and words in the study of verbal expression.

Drawing was selected as the branch of study along whose lines of work and related to them might be found those employments that would afford all the training desired to make the manual course of the school symmetrical and unified.

Apart from the strictly practical sense cultivation, much may be done by this work to assist the æsthetic and the moral growth of the child. The study of graceful forms and harmonious colouring will stimulate a love for the beautiful and appropriate, which will leave its impress on the work of his hand. In his home, in his dress, and in the products of handicraft, good taste will guide his choice of form and colour, and thus render the world brighter and pleasanter both for himself and for those about him. The appreciation of the beautiful and of the pure and chaste go hand in hand, and will keep the mind and heart ever with higher and nobler things.

From the kindergarten through the high school the pupil should be kept in constant intelligent association with the object world about him, that he may acquire knowledge of its structure and the laws governing its appearance. Without this knowledge of his environment, he is but a stranger wandering in a strange land. By the proper study of geometric solids and planes and of forms related to these, he will acquire, through the natural avenues of acquisition, sight, and touch, a comprehensive and classified knowledge of all forms.

His glance will no longer be dazed by a bewildering maze of edges and planes, for in everything he will see but the combination and repetition

of certain type forms. To the little child the form world is as a tangled jungle, and must ever remain a perplexity until he has been led to a classification of its variations.

In this work, so necessary to correct, profitable instructions in drawing, is found an opportunity for the training of the eye, hand, and judgment simultaneously. In these employments the making of geometric forms of natural forms allied to them, and of art forms developed from them and of common objects based upon them, is in part the work for which we have been seeking. What an amount of profitable seeing is here made possible! What employments for the acquirement of deftness and reliability in the use of the hands and fingers! What delightful exercises for the development of judgment and taste!

The general purposes of the course of exercises developed are:—

1. Storing the mind with true conceptions of forms and colours and developing the ability to acquire new concepts.
2. Developing the ability to select from masses of materials that which is appropriate for specified or desired purposes.
3. Directing the attention to the essential elements of the beautiful in nature and in art, neglecting in such attention the accidental, thus developing the beginning of an artistic standard.
4. Training the hand to use, shape, and arrange materials with neatness, accuracy, and taste, that the learner may express artistically, i.e., with truth and beauty.
5. Teaching the use of tools adapted to the age and strength of the child and to the character of materials employed.

The following outlines and remarks show what we are doing:—

#### SCHEDULE A.

Subjects.	Grades.							
	First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.
Drawing:								
Pencil drill	x	x	x	x	x	x	x	x
From construction by the pupils	x	x	x	x	x	x	x	x
From made objects	x	x	x	x	x	x	x	x
From nature	x	x	x	x	x	x	x	x
Original designs	—	—	—	—	x	x	x	x
Working drawings	—	—	—	—	x	x	x	x
Geometric problems	—	—	—	—	—	—	x	x
Modelling in clay:								
From made objects	x	x	x	x	—	—	—	—
From nature	x	x	x	x	x	x	x	x
To measurement	—	—	—	x	—	—	—	—
From the cast	—	—	—	—	—	—	x	x
Original designs	—	—	—	—	x	x	x	x
Carving in clay:								
Ornament from the flat, incised	—	—	—	x	x	x	x	x
Ornament from the flat, in relief	—	—	—	x	x	x	x	x
Original designs	—	—	—	x	x	x	x	x
Construction with other materials:								
Sticks	x	x	—	—	—	—	—	—
Paper - folding and cutting	x	x	x	x	—	—	—	—
Development in paper from working drawings	—	—	—	—	x	x	x	—
Designs applied—								
To clay	—	—	—	—	x	x	x	x
To paper construction	—	—	—	—	x	x	x	x
To cloth	—	—	—	—	x	x	x	x
Language	x	x	x	x	x	x	x	x
Colour	x	x	x	x	x	—	—	—

## SCHEDULE B.

*Tools and materials in the hands of children.*

Grades.	Clay.	Sticks.	Tablets.	Pencil and paper.	Coloured paper ; water colours.	Card-board.	Tools for modelling and cutting.	Mud-lage.	Scissors.
First -	x	x	x	x	x	—	—	x	—
Second -	x	x	x	x	x	—	—	x	—
Third -	x	—	—	x	x	—	—	x	x
Fourth -	x	—	—	x	x	—	x	x	x
Fifth -	x	—	—	x	x	x	x	x	x
Sixth -	x	—	—	x	—	x	x	x	x
Seventh -	x	—	—	x	—	x	x	x	x
Eighth -	x	—	—	x	—	—	x	x	x

The work represented in the foregoing is correlated with most of the work laid down in the course of study for the respective grades. The manual training below that of the shops (seventh and eighth grades) is tributary in a valuable degree to the study of art, as is easily seen. These employments, however, give the very training desired as a preparation for the use of tools when the children go to the shops, while everything done helps in securing knowledge of some other branch of study ; helps not only in learning and understanding it, but in representing and applying what is learned. What is done with the hands in connection with each subject is that which is necessary for learning by the correct method, as is our contention, and without which the child would not learn naturally and rationally. This is but experience getting ; correlating mind and physical instrumentalities in the process of learning. Yet this is exactly what is wanted as the early steps in correct manual training, leading directly to the mechanic arts ; nothing better could be provided for this purpose. Furthermore, it refines and trains on the art side. This is and ought to be the tendency of the mechanic arts in an advancing civilisation. The employment of sloyd, or a primary course of manual arts of some other kind, but not correlated with the other studies of the grades, would not be in the interest of economy and would add to the burdens of the child, while its logical tendency would be to prevent the rational teaching of the other branches of learning. The hand has association with mind in acquisition and in representing knowledge in all the primary elements. This association gives a value to handcraft that simple, isolated hand training for that purpose alone can never give. The value of isolated training is to this training in association as the effectiveness of pounding cold iron would be to hammering iron of proper heat for purposes of welding.

Manual training and mother-tongue learning should, for psychological reasons, not be isolated, *i.e.*, taught apart from knowledge making in the formative period. In our schools manual training is not isolated below the sixth grade for girls and the seventh grade for boys. The manual training that we give before the isolation period is that which would be given were the work not to be continued in shops above, for this we believe is necessary for the desirable correlation of mind and bodily activities in knowledge getting in the formative period.

The shops of the grammar schools and of the high schools are but the provision for the continuance of training already secured ; training which shows valuable results. They, the shops, are the logical outgrowth of that which is begun in the primary school.

# APPENDIX C.

## TEXTILE WORK AT THE UNIVERSITY ELEMENTARY SCHOOL, CHICAGO.

The following is taken from an article on this subject by Miss Althea Harmer, in the third issue (April, 1900) of the *Elementary School Record*, the general topic of the number being "Textiles":—

Three stages of development have been selected, because of connection with the history work, and because the materials and implements involved in the different processes are of such a nature that the children can make their own deductions from simple experiments, and can carry out the whole process from the handling of the fibre in its natural condition to the woven cloth.

The value to the child's social education lies in his gradual growth in knowledge of the meaning of industrial organisation in its simplest forms,



A CORNER IN THE TEXTILE ROOM.

and in following each period of development when the child is himself at such a stage of social advancement as to readily comprehend cause and effect in the organisation of the industry he is following. Just as in the material processes where the child is able to rediscover and carry out the whole process from beginning to end, so on the social side he can organise the industry step by step from the primitive through the household and domestic stage, and, dramatically, even through the factory stage. The three stages of development are:—

1. The primitive stage. In working from the inventive side the children get a knowledge of raw materials, a technical skill in handling them, see the value of implements, and invent mechanical devices for converting the raw materials into cloth. Beginning with primitive implements—distaff, spindle and loom—each step made is traced out in the mechanical advantage gained in the application of the force used.

2. The household and domestic stage: colonial period. In this period

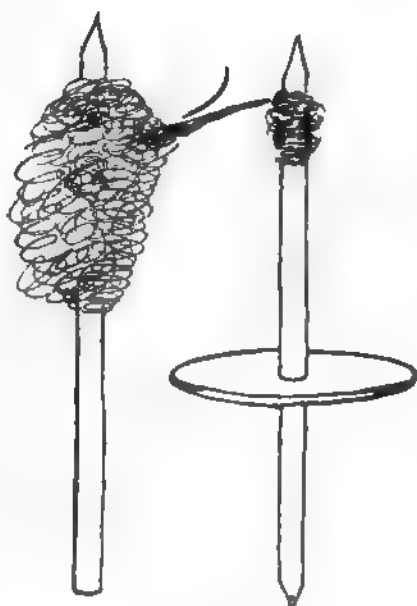
the educational value is in the broad, historical background furnished, and emphasis is laid more on the social side. Attention is directed to the influence of occupation on community life, the development of trade and trade centres, and the manner in which these have shifted and developed along the line of history; to the concentration of industries as conditioned by environment; to areas of production of raw materials, climate, soils, etc., and a general view sought of routes of trade and means of transportation, in the development of commerce.

3. The factory stage. Here emphasis is laid upon the invention of machines, showing the utilisation of the forces in nature which give increased production. A review is made of the machines from primitive times; the mechanics and physics of each are worked out, and a mathematical calculation is made of the amount of work done by each.

A study of different fabrics due to the structure and nature of fibre is made, determining texture, hygroscopic nature, relation to warmth, inflammability, etc. Chemical processes involved in the separation of waste material is worked out in the processes of preparing raw material, scouring, dyeing, and steaming.

Since space does not permit a complete statement of the whole scheme, the primitive stage has been selected as basis for showing the method of work; the other stages are given in outline only. As an introduction to the work, the seven-year-old children gather together what they know from experience of the difference in quality of the four typical kinds of cloth—wool, silk, cotton, and linen. They examine their own clothing, and pull to pieces samples of similar materials from which they get the idea of different kinds of fibre. Samples of fibres are examined in the natural state—the silk on the cocoon, cotton in the bolls, wool as it is sheared from the sheep, flax as it is gathered from the field.

They select the fibre which they think was probably used by peoples in primitive conditions, i.e. "that requiring the least preparation, reaching their conclusion by means of the following process: They unwind the silk from the cocoon, find it fine, delicate, and difficult to handle. They remove the cotton from the bolls, and separate the seeds from the fibres—a tedious task. Retted and unretted flax show the long process of decay necessary to remove the fibres from the stalk. The wool, however, which can easily be twisted into thread with the fingers, is invariably selected. Each step in the process is so dependent on the nature of the material that the children can make the steps logically and independently. A fleece is examined, and methods of shearing talked over. The next step in order would be a visit to a sheep ranche. If this is impossible the children can substitute photographs and the relation of personal experiences. The relative quality of the different parts of the fleece is observed, and also the duties of the wool "sorter." Feltings, tarred locks, brands, and wool from the lower parts of the legs are removed

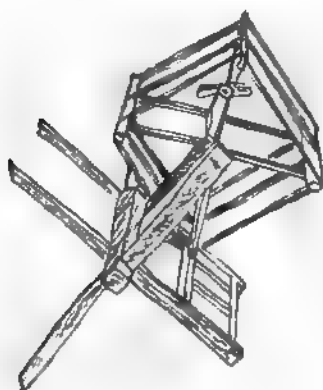


Distaff and spindle, 12 inches long; disc, 3 inches in diameter.



and spun into coarser yarn. The long, clean wool from neck, breast, and shoulders is made into yarn for the finer cloth. The back is usually full of burrs, and more or less matted, requiring care to get into shape for spinning. The children work out the process in detail for themselves by a series of experiments. They take wool from the fleeces to get into condition for spinning. The first thing that naturally suggests itself to them is to wash or "scour" it. Each child tries spinning both "scoured" and raw wool for the purpose of comparison. The oily fibres of the raw wool slip apart easily; the harsh, dry fibres of the scoured wool are matted together, and hard to manipulate. Thus they find from experience the reason for using unscoured wool in hand spinning.

Therefore, in order to spin wool in any quantity burrs and dirt are first removed from the raw wool. One child suggested in order to facilitate the process, "If you spread the fibres like a cobweb the dirt will fall out." Three questions were raised in the course of the work: How would the fibres have to be arranged to make an even thread? How would the cross-fibres



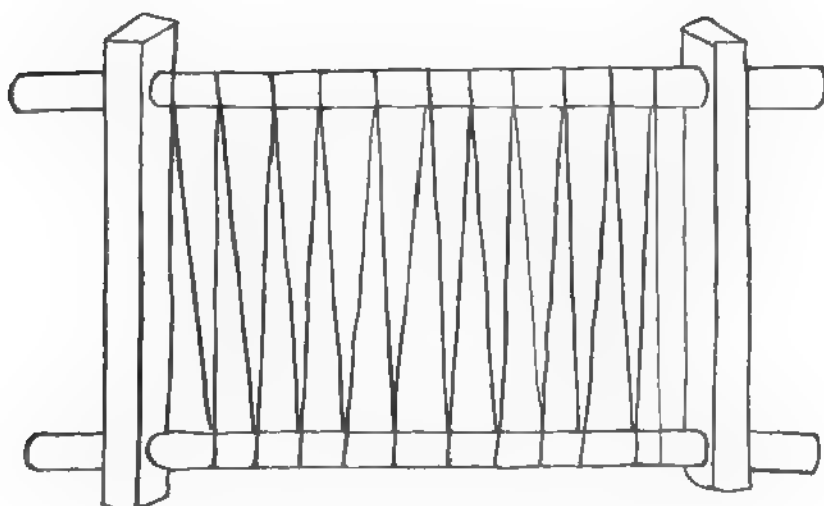
Triple reel  $2\frac{1}{2}$  feet wide. Made of lumber  $2\frac{1}{2}$  feet by 2 inches crossed in the centre, and joined by lumber 2 inches square. At the top of crossed pieces on one side was fitted a strip 2 inches square. Holes were bored in this, and dowels 18 inches long put in. Strips of wood 2 feet 1 inch were fastened to the dowels, there being four in all.

interfere with the evenness of the thread? How would dirt interfere? At the end of the lesson the children formulated the purpose and method of carding. The clean, fluffy mass of wool was drawn out in a long "sliver" one inch wide. Where thin places occurred they fitted in loose strands of wool. This gave them a clearer idea of the interlocking of the wool, due to the wavy character of the fibre. Carding implements were worked out. One wanted to bring a comb; fastening pins in cardboard was suggested, or making a comb of wood, with several coarse-teeth to take the place of the fingers. The fleece, as a whole, and even raw wool, was new to nearly all the children. Many questions were asked concerning it, such as, "What is the difference between hair and wool?" Wool and hair were examined under the microscope, and sketches made of the microscopical appearance of the two, showing the rough, scaly surface of the wool. The children twisted the drawn-out sliver of wool to make a thread by rolling it between their fingers on the knee. When the sliver was too thick, the wool simply matted together; it would not unlock to make a hard twisted thread. They tested the difference between matted wool and spun thread; also experimented to find the greatest number of fibres which would spin without matting. The children gathered smooth twigs in an open lot near by and wound their spun thread on it to prevent tangling.

The child easily discovers that, when the end of the thread is left free and the twig is dropped, the twist is lost and the thread unwound. He reasons that by twirling the twig in the opposite direction the twig can be made to do the work he had previously done by rolling against his knee. He discovers also that when the twig is weighted with thread it draws out the carded wool, and assists in the spinning. So the twig is weighted artificially with clay, stone, or wood, and the wheel is suggested, and its use in balancing and in giving greater speed to the spinning. The advantage of having the wheel in the shape of a disc is worked out by the children realizing that an uneven distribution of the weight interferes with the smoothness of the motion of the spindle. The children were pleased with the idea of the

derivation of the toy top from the spindle; that when they were playing with tops they were doing what the child of long ago did when he imitated his mother's spinning. (*See Illustration, page 191.*)

The distaff and spindle were made in the shop, and each child practised spinning a fine, smooth thread. They compared this with hand-spinning, and showed that it took less time and labour to produce the same amount of thread—many more fibres being made to interlock, and the thread more uniformly twisted. Thus, by comparing in each case the hand-work and that done by the crude implements, they were brought to realise the use of the advance made in this first step in spinning. The thread was made rather fine for weaving. It was compared with the factory yarn, which was unravelled, and found to consist of three and four strands, and



Primitive loom. Made from  $\frac{1}{2}$  inch stock, 8 x 11 inches,  $\frac{1}{2}$  inch dowel

in separating these strands they found the twisted parallel fibres of wool. After having analysed the structure of the thread in this manner, they prepared to make "three-ply" yarn of the thread they had spun.

They worked out the idea that the strands would have to be spun together in the same manner as they had spun the yarn; that the various strands would have to be drawn out evenly, thus necessitating a frame on which the bobbins could revolve.

The children held three bobbins in position, and then measured for the desired shape and size of the frame. (*See Illustration, page 192.*)

The yarn was ready to be scoured and dyed. From previous experience the children knew the yarn would have to be in loose hanks to dye evenly. They wound the skeins about the backs of two chairs, one child delivering the yarn from the bobbin, while another regulated it.



Shuttle 7 x  $1\frac{1}{2}$  inches.

They found it slow work, and succeeded in making very small skeins. They decided to make something similar to the bobbin frame upon which to wind the skeins. Colonial reels were examined, and a simple one made in the shop. The yarn from the spin ~~dies~~ was wound into loose hanks for dyeing. The yarn was scoured and dyed ~~in~~ the science periods; and, as a preparation for weaving, cloth was examined and its structure and texture compared with the mats and baskets they had previously woven. The fact that weaving

of materials that did not require spinning must have long preceded the invention of spinning was shown in the following manner: The textile work of the primitive peoples of to-day was examined, and found to consist chiefly of grasses and various other raw materials. The beaten bark or "tapa" of the Hawaiians was examined to show the interlacing of the fibres. The probable discovery of the shepherd who found the east fleece matted together after the exposure to rain and sun was told as a story. The effect of water and heat on wool was tried, and in some cases resulted in a fine piece of felt. The weaving of a rush mat from the chance placing of the reeds forming a sort of pattern on the clay floor of a primitive hut was given as a probable origin of pattern weaving. The children gave the cocoon, the bird's nest, and the spider's web as instances of weaving. In the cloth the interlacing was found to be regularly adjusted into two sets of threads, respectively "warp" and "wool."

Each child explained his way of constructing a loom. The simplest one is shown in the cut. The two rods are to hold the warp in position, and the two cross rods are to keep them stretched. A weaving needle was used to insert the wool. The wool and warp were made of the thread the children had spun. (Illustration on page 193.)

In preparation for the second piece of weaving, a small temporary loom of pencils and string was made, to find some means of separating the threads to facilitate the weaving. Two children brought in a heddle, as shown in the cut fig. 1, which is similar to the heddle used by the Zuni Indians.

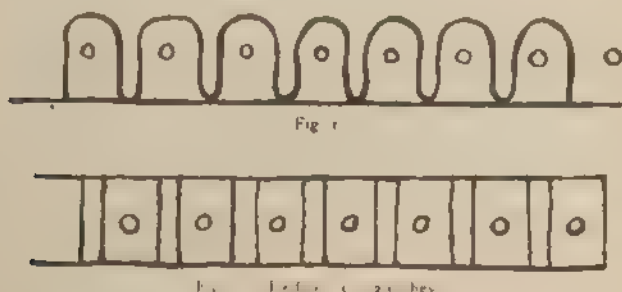


Fig. 1. Heddle used by the Zuni Indians.

The weak point of the open spaces in their heddle was soon discovered by the children, who suggested pasting a strip of cloth along the open edge, thus enclosing both sets of threads. After making their drawings for the shop, a Zuni heddle was examined, and also photographs of the blankets of the tribe. Much interest was shown in the colours and designs of the Navajo blankets. Original designs were made with the art teacher. A Navajo loom was made for the pattern weaving, which involved a careful piece of work in construction. An interesting fact in the effect of application upon design was shown in the modification of design and colour of the pattern after the weaving was begun.

The interest in the work seems to be two-fold; it would be difficult to say which is the leading one. The materials in themselves and the carrying out of a project to its end give one strong interest. The social instinct utilised in its historical side in carrying out the same things that other people have done reinforces the first. The way in which the children enjoy carrying out the process historically is shown in the scorn they express for the child, of perhaps less imagination, who jumps at every short cut possible while at the same time they adopt the short cuts which legitimately follow in the course of historical development. They rejected the carder, and carded patiently with their hands, at the same time appreciating the advance made in using the whirling spindle instead of the weighted stick in spinning.

One boy of ten acquired much appreciation for rugs and hangings at home in connection with which he specially noted the adaptation of design to the kind of weaving and material used, as well as the colour effects produced. Another boy, with this same interest, found pleasure in setting up and weaving at home a Navajo blanket from his own design. One small child, whose accomplishment, perhaps, showed unusual perseverance, spun with the distaff and spindle, while being read to at home, a skein of remarkably fine, even thread.

From the previous sketch the following educational points can easily be gathered :—

1. Training in observation, in the inspection of different fabrics and fibres ; and this is not ending in itself, but for the sake of forming a conclusion regarding their adaptability to certain purposes.

2. This clearly involves exercise of judgment, or thought power. This of course, comes in every definitely, also in all the " re-inventing " work where, as previously indicated, the tool, or instrument, and method of going to work are always dependent upon the material, on one side, and the result to be attained on the other. These being given, to find the third term is the problem : surely as logical an exercise as any in geometry, with the advantage of being concrete, and calling the constructive imagination into play.

3. Since the particular acts of judgment called for are all related to one main topic, and since they follow one another in an orderly way, by slight steps, but covering finally a very large field, there is continuous logical discipline, which, moreover, reacts into giving an insight into the logic of history itself.

4. As just suggested, it connects directly with historical work, and gives a background which will make the later study of economics much more fruitful and concrete. Similar connections with nature study, as regards the materials used, plant and animal ; with physical geography, as regards conditions of soil, climate, etc., whence raw material comes ; and with commercial geography, as regards manufacture and distribution, suggest themselves at once.

5. Positive or manual construction is continuously required, as well as the imaginative, thus " correlating " with shop-work, as seen in the manufacture of spindle, loom, etc. It necessarily connects also, as regards colours, designs, etc., with the work of the art department.

6. All these aspects meet in and radiate from the continuous and direct activity or occupation of the children themselves. From the standpoint of the child there is but one thing going on : he is occupied in making things, with weaving, etc. ; he is busy in doing something which appeals alike to feeling, perception, imagination, judgment, and manual skill, utilising them in an activity which interests him.

The colonial period has only been worked out in part with the children. The general scheme is given in the following outline, in which are also given the ages at which the different kinds of work appeal to the children. The concentration of this work in certain years has followed as a result of experimentation with children varying in age from six to twelve.

## OUTLINE OF WORK FOR STUDY OF TEXTILES.\*

### AGE SEVEN.

*Time : Two hours a week, one year.*

1. Fall quarter : Primitive preparation of wool from the fleece to the

\* Otis T. Mason, *The Origin of Inventions* ; *idem*, *Woman's Share in Primitive Culture* ; Charles Vickerman, *Wool and Wool Spinning* ; Richard Marsden, *Cotton Weaving*. See also *School and Society*.

finished cloth by means of simple implements made in the shop. This includes primitive methods of cleaning, carding, spinning, scouring, dyeing and weaving.

2. Winter quarter: Flax cultivated in the garden and made into cloth, using simplest methods in retting, heckling, scutching, etc. In weaving, the principle of the heddle is worked out, also the weaving of the two colours of linen in checks and diagonals.

3. Spring quarter: Analysis of structure of ordinary thread and preparation of four ply thread of fine woollen yarn to use in weaving a mat, the mat to be woven in an original design in imitation of the Indian blankets. Construction of a Navajo loom, the five-thread heddle making it possible to do more careful pattern weaving. The constructive work in the shop, connected with this would be the making of spindle and distaff, loom with heddle, shuttles, bobbin frame, reel, carder, and heckler.

#### AGE EIGHT.

*Time: Two hours a week, two quarters of twelve weeks each.*

Weaving of baskets from reeds and grasses, the basket to be used for sewing materials. Materials made for articles required in sewing baskets: felt, linen cloth, yarn for decorating, braid and cloth in woven design for pin cushion. (At this age the children's fingers are better able to take up basket-weaving and sewing, and development of textile work is dropped for a year.)

#### AGE NINE.

*Time: Two hours a week for twelve weeks.*

Study of silk cocoon and methods of manufacture of silk. Early experiments in silk culture in America.

#### AGE TEN.

*Time: Two hours a week, one year.*

Domestic industries: early cultivation of wool, flax, and cotton; effect of climate, soils, etc. Extent of the cultivation of each fibre, and maps made showing favourable areas, conditions of manufacture; development of implements from primitive to colonial period worked out from the side of invention; spinning wheel and colonial loom made in the shop for the spinning and weaving of linsey woolsey. A technical study is made of the character and structure of wool, cotton, and flax fibre. A collection is made of the typical kinds of cloth made of these fibres and examined as to texture, relation to warmth, moisture, inflammability, etc., leading to intelligent selection of cloth.

#### AGE ELEVEN.

*Time: Two hours a week for twenty-four weeks.*

Transition from domestic to factory system: development of textile industry in England; history of invention of machines used in the manufacture of cloth. Relation of industry to environment. Concentration of industry. Growth of trade centres and manufacturing towns.

#### AGE THIRTEEN.

*Time: Two hours a week, twelve weeks.*

The factory system: history of cotton industry; areas of cultivation and manufacture; machines and processes; tariff as affecting manufacture and prices; study and comparison of fibres and fabrics.

The study of textiles is discontinued for a year, and then taken up in a general study of industrial history.

## APPENDIX D.

The following is taken from a short statement prepared by Mr. C. W. Judd, director of manual training under the Manchester School Board, published and circulated amongst Manchester teachers by the Board, with other notes on the kindergarten, the elementary school work, the work of American girls, and science teaching in American schools, at the time of the visit of the American Educational Exhibit to Manchester, February and March, 1901 :—

America has fully recognised the fact that the combination of hand-work or manual work with mental training is an essential of true education, and to secure this essential expense is not considered.

A point worthy of imitation by home authorities is the importance placed on the class-rooms used as manual training rooms. These are invariably well lighted, heated, and ventilated, identical in most instances (and superior in others) to the ordinary class-rooms used for literary work ; decorated where necessary, built with a view to reduce dust accumulations to a minimum ; bright and cheerful, and provided with everything necessary for the health and comfort of both teacher and scholar.

(For example see cases 21 and 28.)

The courses of work of the kindergarten and manual training schools are one and the same in principle, and in many States the whole series of hand-work subjects—except writing—is considered as manual training.

The advantage of this system is obvious. Correlation of work becomes possible, continuous advancement by easy and permanent stages is assured, the children surmounting little by little the difficulties encountered in each step attempted. In the manual training high schools (a type which has no counterpart in this country) the time allotted to manual training varies with the year of study, and also with the districts. For instance, in Brooklyn the actual time apportioned to wood-working during the first half of the first year is nearly seven hours per week, in fifty-minute lessons or periods. In the second half of the same year  $3\frac{1}{2}$  hours per week are given to wood-turning and lathe work for boys, and  $3\frac{1}{2}$  hours to clay modelling for girls. In the second year  $3\frac{1}{2}$  hours are devoted to forge work, and  $3\frac{1}{2}$  hours to sheet metal work for boys, and an equal amount of time to wood-carving for girls. Printing and bookbinding form the course of work during the third and fourth years, and occupy about five hours per week.

When it is considered that the above schemes of work form a portion of the ordinary curriculum of the classical, Latin, and commercial courses of the high schools of New York City, with pupils of the ages of sixteen to eighteen years, the admirable blending together of the manual and mental training provided for the young citizens of the American nation is still more evident, and adequately answers the question, How is it that America is coming so rapidly to the front in the race for supremacy in the manufacturing and commercial world ?

In making a comparison (from the exhibits) between the actual manual training (as we understand the term) as carried out in the States with the work of our own country, we are bound to give our opinion, that although we are lacking in correlation schemes and preliminary training, yet, taken year for year, scholar for scholar, and school for school, the selected examples can be easily beaten by our own scholars at the present time.

This may be traceable to two causes :—

First, the adherence by the American instructors and directors to the Swedish system of woodwork, without embodying the fundamental principles which dominate that system.

Second, to the neglect of abstract exercises in the various courses of work.



## APPENDIX E.

The following is taken from "American Industrial Education: What shall it be? Preliminary Report of a committee of the Society for the Promotion of Engineering Education, made at the New York meeting, held July 2nd and 3rd, 1900":—

## V. MONOTECHNIC OR TRADE SCHOOLS.

These schools are comparatively new to the American people. They have been known in perpetuity abroad, and are most fully developed in Germany. But the foreign pattern is not well suited to American needs. There, the student can be marked out for him in advance. If he is to be an artisan, he is expected always to remain an artisan. The particular trade which he is expected to learn, also, is fixed for him. It is commonly that of his father before him, or that of the prevailing industry of the locality. He is at best a sort of machine, an automaton, worked for what is worth to the family or to the community and the State. His own individual development is not in question. Most commonly he is not even consulted in the matter. His future is his fate, and he yields to it as gracefully as he can. He has little opportunity to rise above the station in which he finds himself. His career is closed in at the top. Society is stratified horizontally. He finds such solace and comfort as he can by ministering to his bodily comforts and his domestic joys, and frets not over vain ambitions. In fact, ambition is a word of little meaning to him, since it can have for him no satisfactory fruition. In these foreign countries, therefore, the trade school is primarily a means of more efficient and more economic production, and only incidentally is it a means of personal development. Your committee believe that this result of trade school instruction abroad is very largely due to the character of the people themselves, and should not be charged against the schools.

In America all schooling should lead primarily to the elevation and development of the individual, and only secondarily to a greater material prosperity. It is, doubtless, through a mistaken notion that the trade school does not do this, that this class of schools has made so little headway in this country. If we teach a boy a trade, it is not only that he may practice it, but that he may become a master workman, an employer, a contractor, a manufacturer, a proprietor, a leader in his culture, and, withal, an influential citizen and a participant in public affairs. That a properly conducted trade school would lead to these results in this country cannot be doubted. We should teach our boys many things besides the mere manual performance of a trade. In the trade school should always be taught some of the scientific theory which accompanies and underlies such performance. It is not necessary, however, to teach all these related subjects in the trade school. We shall continue to rely upon the public schools for the general education. The trade school with us must supplement this, and not displace it. It remains for us to work out a system of trade schools suited to our needs.

The need for industrial training in the various practical vocations and trades is becoming daily more apparent. Not only are most vocations becoming more scientific and less traditional in their practice, but the wholesale introduction of labour-saving machinery and the demand for it in large quantities of the apprenticeship system have cut boys and young men almost without opportunity or resource in entering successfully into these practical callings. In addition to these inherent obstacles, the rules of the trades unions, by which the admission of learners is limited to a very insignificant number, still further shut out young men from all cases of productive employment. In very many cases not even the permission to enter is allowed to learn the business practically, or if, perchance, the permission of the union be extended to him to enter the works as a

learner, he must beware of his steps, for pitfalls may be set for him at every turn, and sometimes even his life may be in danger.

It has come to such a pass, in fact, that the avenues by which American youths can learn almost any practical calling in all its details are often absolutely sealed up. The only recourse is the teaching of all these trades and employments in especially equipped schools. If the would-be apprentice hopes to become anything more than an average workman, he must learn the scientific and practical details of his trade somewhere and it is well established that he can learn them most successfully in properly operated schools. These schools should not individually attempt to teach too much; they should, however, teach the underlying scientific principles of one or two trades thoroughly, as well as the most improved commercial practice. The practice, however, is the most difficult to teach in the school. In the first place, it is hard to find persons having both the practical knowledge and the teaching ability. To impart practical knowledge rationally one must rest it on some scientific or rational basis, and not simply upon the dictum of tradition. This rational basis of trade practices is commonly either entirely wanting, or if it exists at all, it is quite unknown to the practitioner. His reasons for his doing a thing so and so are usually far from sound. Competent instructors in the practical trades are, therefore, very difficult to find.

In spite of all these difficulties, very efficient trade schools are established, and others are called for by the proprietors and managers of various industries. At the last meeting of the American Foundrymen's Association, held in Chicago, June 5th and 7th, 1900, a resolution was adopted calling for high grade industrial schools to teach the science and art of founding. The school in clay industries started a few years ago at the Ohio State University has already resulted in the establishment of new ceramic works of very great promise—as a rule the expense of establishing and maintaining these schools should be met by industrial corporations, or by individuals, or by the joint action of manufacturers, locality, and State. Some of the more important industries now requiring such schools will be named.

1. *The Textile Industries* are among those which most readily submit themselves to monoteknic or trade-school instruction. Trade schools in these industries have long been common abroad, and a most successful one has been in operation for many years in Philadelphia, and one for a shorter period in Lowell, Mass.; a number of new ones have recently been established in New England. The State of Massachusetts makes a standing offer of \$5,000 dollars assistance to any city or corporation in the establishment of a textile school which complies with certain requirements. In the higher textile schools, the science of dyeing and the art of designing are taught as well as the practice in weaving and finishing all grades of fabrics. These higher courses are several years in length, and are best pursued after taking a high school or manual training school course. Even a college or an art school, or an engineering school preparation, before one enters the textile school, is none too much if one wishes to fully master the industry, to understand mechanical and the power plants and also to become familiar with the business departments of the manufacture and the sale of textile fabrics on a large scale. Many of the highest and latest developments of the science of chemistry find their application in the dyeing of various fabrics, and the large dyeing and printing works in Germany have many chemists constantly engaged in studying new and improved applications of chemical knowledge to the textile industries.

2. *The Machine Trades* are at the basis of all manufacturing, and superiority in these very largely sustains our modern national prosperity. The fundamental principles and most of the practice of these industries can best be taught in schools having proper equipments. Formerly a great deal of hand-work was done, and every journeyman in the shop was expected

to be able to perform any task in the ordinary routine of shop duties. This demanded a long apprenticeship in actual shop practice and the acquisition of a high degree of manual skill. The recent general introduction of automatic and labour-saving machine tools, and also tools of extraordinary size, has, however, created a demand for an entirely new class of workmen. Now the average workman in our large shops is only a machine attendant, and he is kept employed with a single class of machine tools. His business is to learn the capacities of these tools, and to get the most work out of them of which they are capable. In fact, some of our most progressive superintendents affirm that they prefer these narrow specialists to the old-fashioned all-round machinists. For a tool attendant of this class very little general training of any kind is required. With good instruction he will learn in a few days, or perhaps hours, to operate a machine intelligently, and very soon he will be working it to its full capacity. Trade schools are not a necessity for these men. This system carries in it, however, the seeds of its own destruction. By this system no one man is learning the business in its entirety, and hence no one is being trained to superintend or manage the business both theoretically and practically. The graduates of our colleges of mechanical engineering would make the most capable men for these higher positions of superintendence if they could be given an opportunity, after leaving the schools, to learn all the practical details of the business. It has not been possible hitherto to secure such men in sufficient numbers. On the one hand, the managers of works have not been fully informed as to the benefits of such a course, and on the other, the graduates of our schools of mechanical engineering are not always willing to begin at the bottom to learn the business. Failing these, the graduates of our manual training schools would serve very well for these positions of trust and supervision. These are more ready to enter the lower ranks of mechanical employment and work their way to the top. By a special kind of apprenticeship in the shops, some of these young men would rapidly develop into very good foremen, superintendents, and managers. In many cases, however, the trade unions would seriously interfere with any free application of this sort of a programme.

#### VI SUPPLEMENTARY SCHOOLS FOR INDUSTRIAL WORKERS.

These are schools for those bright and promising boys and young men who have from choice or from necessity already gone to work in some industrial calling with little or no scientific or technical schooling, as well as for those boys who can be reached by no other class of industrial or technical schools. The present demand for these supplementary schools is very large, but with the general introduction of manual, scientific, and art education, into the public schools, the demand for such supplementary schools will be very greatly reduced. The most promising foundations for the organisation of these schools your committee believe to be the following:—

1. *Proprietary Trade Schools in Connection with Industrial Works.*—Nearly all lines of production are now organised into a few great manufacturing centres, and all the factories of any one class in the whole country are more than likely to be operated by a single joint-stock company. This company shapes the industry over the whole American continent. We believe that it will be profitable in all these great industries to establish industrial schools in connection with all their large factories, in which a few of their brighter workmen can be educated not only in all parts of their business, but in the underlying and related sciences, in order to become capable foremen, superintendents, and inventors. These are at least a considerable proportion of the men to whom the stockholders must look for continual improvements, for skilful management, and for economic operation. After we have passed through the stock-jobbing stages of these new and mammoth combinations, we shall surely come around to

this basis of most economic production and safe business management. We are now passing rapidly through an evolutionary, if not a revolutionary, stage in these matters, and our general managers of large works are coming to realise the necessity of an educational side to their business. It is said of Americans that they are quick to see opportunities of improving their business, and are ready to adopt any measure which promises a sufficient return for the outlay. Your committee feel that these proprietary schools in connection with industrial works will make their own way in this country without any organised campaigning, but some systematic effort to present their advantages will hasten their general introduction. Whether these schools take the form of night schools, or half-time day schools, or of financial aid to the brighter lads to attend some specific courses in a technical school, or all these combined, is not now material.

2. *Correspondence Technical Schools*.—These have sprung up like magic in America in the past ten years, and are now thought by many to be serving a great need. Whether they will remain in demand, or are only a passing phase of educational opportunity, may be a question. Until other opportunities of acquiring a technical training become practically universal, however, it is very clear that they will find a great work to do. The fact that a single one of these schools (the oldest one) is now carrying on its roll of students over two hundred thousand names is the best proof in the world of the great demand for technical education. These schools supply their students with specially prepared texts, and have systematic correspondence methods of imparting instruction. If the student is willing to do his part, he may obtain in this way a very fair substitute for a school training.

These schools are but another evidence of the quick initiative of Americans. The demand was no sooner felt than the supply was forthcoming in this new and original kind of a school. Such schools, however, can never supply the place of any of our regularly organised and equipped day, or even of our evening, technical schools.

3. *City and Endowed Evening Schools*.—These are designed to serve young men who are employed throughout the day. They are quite similar to such schools abroad, most of the so-called technical schools of England being of this class. The student comes two or three evenings a week from seven or eight to ten o'clock. He comes more or less worn out by his day's toil, and he reaches home long after his usual retiring hour, practically exhausted. His mind cannot be alert with his body in a fagged-out condition, and hence this class of instruction is at once a great hardship, and, in comparison with day schools, it is of relatively little profit. Men who are engaged in any kind of actual manual labour through the day are greatly handicapped in their attendance upon such schools. They are most valuable for clerks, book-keepers, draughtsmen, and the like. They can never become a very substantial element in the technical education of the industrial classes.

The criticism contained in the last paragraph is important in view of an identical criticism of English technical schools by Dean Alderson, of Armour Institute, Chicago. His words were not quoted on page 150, in view of Mr. Vice-Consul Erskine's references in his paper.

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## PART II.

In the previous part industrial training has been looked at largely from the point of view of education, *i.e.*, certain educational ideals and methods have been considered, and their industrial bearings noted. Now, in the form of testimony given before an Industrial Commission, we shall look at education rather from the point of view of industry. One does not suppose, however, that one thereby covers the whole field. Subtle and difficult questions are still left over, such as: What if the economic aim, current in commercial or industrial practice, is in conflict with the ethical aim inseparable from a liberal education? Dr. Hailmann's words, quoted on page 178, in spite of his observation of economic effects of education as superintendent of institutes and schools for Indians, are only a partial answer, indeed, are probably not intended as an answer to the deeper problem, arising from a possible difference of educational and economic standards and ideals. How, for example, do Trades Union standards of work, which may have been adopted for the protection of the average or the less efficient worker, harmonise with the educational ideals of the manual training workshop? Or how does the separation of employer from employed, brought about by great combinations of capital, fit in with the spirit of a technical course which has had in view the training of the man as well as of the mechanic? To such questions no answer is attempted in this introductory paper. But their existence cannot be altogether overlooked.

The following extracts are reprinted from the section having special reference to Education of the report of a recent Industrial Commission:—

*Meeting of the Industrial Commission at its Offices in Washington, D.C.,  
January 11th, 1899.)*

## TESTIMONY OF DR. WILLIAM T. HARRIS, COMMISSIONER OF EDUCATION.

It will be seen that the total amount of schooling given on an average to each inhabitant in the United States by all schools, public and private, is nearly five years of 200 days each. It will be seen, too, that there is a wide limit of variation in the several sections of the United States. The year in this item of statistics is reckoned at 200 days. In rural districts the school year very rarely contains so many as 200 days. Usually it is only three or four months and contains only 90 school days, or even less. The States that have comparatively few cities average a very small number of days in the school year. For instance, the South Atlantic Division, comprising the Gulf States, has comparatively few cities or large villages, and its average school year is so short that the total amount of schooling given to each inhabitant (measured in years of 200 days each) is only 3.08 years, while the North Atlantic Division, the region of the largest cities, is giving to each inhabitant an average of 6½ years of 200 days each.



AVERAGE TOTAL AMOUNT OF SCHOOLING (INCLUDING ALL GRADES OF BOTH PUBLIC AND PRIVATE SCHOOLS) EACH INDIVIDUAL OF THE POPULATION WOULD RECEIVE UNDER THE CONDITIONS ACTUALLY EXISTING AT THE DIFFERENT DATES GIVEN BELOW.

[Expressed in years of 200 school days each.]

—	1870.	1880.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.
United States -	3.32	3.59	4.41	4.51	4.41	4.48	4.63	4.75	4.84	4.94
North Atlantic Division -	4.98	5.77	5.94	6.04	6.08	6.09	6.32	6.54	6.48	6.50
South Atlantic Division -	1.20	2.13	2.68	2.72	2.68	2.73	2.90	2.85	2.98	3.08
South Central Division -	1.09	1.81	2.48	2.60	2.62	2.58	2.88	2.88	2.79	2.83
North Central Division -	4.00	4.75	5.28	5.37	5.14	5.30	5.30	5.46	5.75	5.90
Western Division	3.46	4.06	4.44	4.65	5.00	4.83	4.92	5.21	5.46	5.54

AVERAGE TOTAL AMOUNT OF SCHOOLING RECEIVED PER INHABITANT, CONSIDERING ONLY PUBLIC ELEMENTARY AND SECONDARY SCHOOLS.

[Expressed in years of 200 school days each.]

—	1870.	1880.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.
United States -	2.91	3.45	3.85	3.93	3.97	3.99	4.13	4.24	4.28	4.37
North Atlantic Division -	4.43	4.84	4.99	5.06	5.10	5.10	5.28	5.50	5.61	5.61
South Atlantic Division -	0.80	1.90	2.42	2.46	2.46	2.51	2.70	2.66	2.67	2.78
South Central Division -	0.78	1.57	2.20	2.31	2.41	2.38	2.64	2.65	2.45	2.49
North Central Division -	3.71	4.19	4.67	4.74	4.75	4.84	4.85	5.00	5.16	5.29
Western Division	2.77	3.57	3.98	4.16	4.46	4.39	4.49	4.76	4.95	5.02

What is the nature of the education given in the elementary schools? What does it do for the people?

The first and most important thing, it seems to me, in the United States is to make everybody a reader. Each person of a proper age should be able to write and read. The illiterate person is not able to work by himself except in the simplest kinds of employment. He requires constant direction from a "boss." The person who can read and write can follow written or printed directions and can be held responsible to do good work when he is not under immediate supervision. More and more it happens that the work of a community gets to be of such a kind as to demand in the labourer a knowledge of reading and writing. An illiterate man cannot deliver the orders of a grocery store or market. He must be able to read the names of the customers and the names and numbers of the streets when they are to be found. He cannot correct any errors in his order unless he is able to make a memorandum of the errors.

But it is still more important for a free government that its inhabitants are able to read and write. The free government must be a government chiefly of popular opinion, and popular opinion cannot govern effectively except through the newspaper and the book. There must be a means by which the individual learns every day to know the opinions of his fellow-men near and far. He interprets the opinion of his fellow-



citizens whom he meets from day to day by the opinion of surrounding communities, made known to him through the newspaper. Again, he interprets the public opinion of his State by the public opinion of other States. He interprets the public opinion of his nation by the public opinion of foreign nations. Thus there goes on in the mind of each citizen a comparative study of public opinion, the readjustment of local opinion and sentiment to the aggregate of public opinion and sentiment of States and nations. The general public opinion of the world is a kind of "writing on the wall" in which the individual or the particular section sees that local or partial views are weighed and approved or else found wanting.

It is of all importance that the individual shall know the opinion of his community. He does not undertake what will be condemned by the neighbourhood in which he lives. So it is important for States and sections to know the public opinion of the nation; and it is important for the nation to know the public opinion of the world. Ignorance in this respect leads to useless wars or to useless undertakings which consume the strength of the people and yet have to be abandoned after much waste of labour.

I have frequent opportunity to see intelligent foreigners who visit this country to study our institutions. These people often misunderstand our newspapers. They are scandalised by the way in which the newspaper violates the sacred right of privacy on the part of the individual and the family. Our idea of freedom of the Press is frequently confounded with that of license of the Press. But I have told these visitors that they could not make a greater mistake in explaining the government of the United States than by misreading the influence of our newspapers.

One has frequent occasion to notice the difference when he passes from any nation on the Continent of Europe across the Channel to Great Britain. He comes from a nation comparatively uninfluenced by the newspaper to a country which seems to rely upon the newspaper for the regulation of its daily affairs. In all countries there is daily gossip relating mostly to narrow circles—the village, or the neighbourhood. In England it is noticeable that the village gossip is supplemented through the newspaper by world gossip. In this way we see that the Anglo-Saxon people, whose chief political device is local self-government, has invented a means for making its individualism safe for the nation.

But the American newspaper far surpasses the English newspaper in taking hold of the life of the individual. Information in an English newspaper is served up in the form of elaborate articles, as if written for encyclopædias. The colloquial style of the people is studiously excluded from newspapers and periodicals. In America, on the contrary, the colloquial style of the street and the shop is sought and imitated. The lofty thoughts, the complex details, are written down to the level of the reader. Each reader in America can get far more from his morning newspaper than the Englishman can get from the newspaper of his own country.

The process of creating public opinion, and the process of reducing conflicting currents of public opinion to one standard, are realised far more successfully in this country than in any other. There is, however, an obvious limitation upon this process. A newspaper public opinion cannot penetrate an illiterate community. It results, therefore, that such an illiterate community must be governed by violence, or by external authority secured by other means. The newspaper community is therefore a freer community, because people see the different sides of the question discussed and adopt their own conclusions without reference to immediate external authority. Our newspapers have improved from year to year in this ability to take up great questions and present them intelligibly to people having mere rudiments of education.

Some of these great questions are seen by the mass of the people to be very important in their effects upon the welfare of each inhabitant. They are not all of them remote questions or questions in which nations are more interested than the individual citizen. Take the socialistic question. The

idea has been circulated industriously that the rich are growing richer and fewer and the poor growing poorer and more numerous. This idea was suggested by Karl Marx in his great work on Capital. It has been echoed by Henry George in his book on Progress and Poverty. If every census was made to show the exact items with regard to the wealth of the population and its distribution, an answer would be ready at hand for the newspaper to refute this socialistic doctrine founded on this supposed fact. It would be easy for the United States Census to make a careful study of the assessments throughout the United States, and show accurately how much of the property of the country is in land and how much of it is in buildings and other improvements. With this fact established, the question of Henry George's theory as to the evil in individual ownership of land could be easily settled. No doctrine is dangerous to a newspaper-reading people provided the real merits of the doctrine have been ascertained and their results canvassed and reduced to the popular form of newspaper articles.

Q. (By Senator Mallory.) Before you leave that branch, have you compared the relative attendance in this country and Great Britain, say, or in France or Germany?—A. Yes; a comparison has been made between the school statistics of this country and that of other countries. We have to note in the first place that the United States has a greater rate of increase in population than other countries. Besides this, the number of persons reaching old age is not quite so great as in some of the countries of Europe. The consequence is that the school population, say from six to eighteen years, is a larger percentum of the total population than it is in England, France, Germany, or the Scandinavian countries. In the United States the per cent. of the population which attends school some portion of the year is 22, while that in England is about 17, Germany 18, and in some divisions, say in Saxony, 20 per cent. That of Spain  $7\frac{1}{2}$  per cent.; that of Italy  $7\frac{1}{2}$  per cent.

France, Spain, and Italy made a great effort to bring into school all children of school age after the Franco-Prussian war. The universal prevalence of education in Germany was thought to be a powerful factor in the success of German arms. At all events, other nations imitated Germany in the attempt to secure school education for all their inhabitants. Hence the results in the table I have presented above show that France has  $14\frac{1}{2}$  per cent. of its population in school; England, 17; Italy, 7; whereas before 1875 the schools of these nations enrolled much smaller proportions.

#### THE INDUSTRIAL SIDE OF EDUCATION.

There has been a great activity tending to the adoption of new industries in the United States, especially since the international fair held at Philadelphia—the Centennial Exposition. It is interesting to note that Russia in her exhibit on that occasion showed what could be done in the way of reducing the elements of trades to a teachable form. When the elements of industries have been brought into a pedagogic form, they can be taught in progressive lessons to the classes. This is a much less expensive form, both for teacher and learner, than the co-called apprentice system. The Russian Government, after the Crimean war, became aware of the fact that there were more people producing raw material, especially in the form of agricultural production, in proportion to the total population, and a smaller ratio of people engaged in manufacturing and commerce than in any other country in Europe. Russia is a very important nation to study for lessons in political economy, because the heads of the Government in Russia have seen what is necessary to do in their national housekeeping in order to make their people strong against the nations of western Europe. A nation that depends entirely upon agriculture, even if it is a fertile country, will not be a wealthy country. Let it produce enormous quantities of agricultural productions, whether of grazing or tillage, and if the products

have to be sent a quarter of the way around the world to a distant land to buy the necessities and creature comforts which are furnished by manufactures, the necessary cost of the transfer and exchange reduces the net result of the labour of the people to a moderate amount of wealth. This is the case even in Australia. The home productions of agriculture and grazing in Russia would not seem, from statistical returns, to amount to more than 6 or 7 cents per inhabitant per day. But the skilled workmen introduced into the villages and cities of Russia from the west of Europe, together with the school shops for the training of skilled labour, have increased the wealth of Russia so that the annual product is somewhere between 12 and 14 cents for each individual, and the rate is continually increasing. We have all read the history of Peter the Great, who set the example to his monarchy and taught them how to increase the industrial power of the nation by adopting the inventions and the skilled labour of western Europe. The village-community idea still prevails in the civilisation of Russia, although it has been outgrown by the peoples of western Europe. The village community is an advance on tribal civilisation, but its productive industry, as compared with that of Holland or England, is far inferior. The free owning of land in severalty is a much more productive form of agriculture than the possession of land in common or than the cultivation of it in common.

Q. (By Mr. A. L. Harris.) What is the production in the whole United States? Is not that the highest of any nation except Australia? What was it in 1880? What was it in 1850? A. In reply to your question I will ask permission to quote from an article of mine in the *Forum* for October, 1897, in which I have given the results of my studies on the United States census from 1850 to 1890, indicating my method of ascertaining the aggregate earnings of the United States, stated in the form of the average daily earning of each inhabitant. To this I have appended certain statistics derived from Mulhall and others regarding the average daily earnings of the inhabitants of Great Britain, France, Germany, Russia, Austria, Spain, and Italy, together with the increase of the use of steam power in those countries.

The most important item of economic statistics is that which shows the total product of the State or nation in the form of the average per day for each inhabitant. This item helps the individual citizen to compare his daily wages or his annual income with the quota which he would receive in case the total product of his State or nation were distributed to each inhabitant without any deductions for capital, for land, or for supervision.

A continual view of this ratio is most healthful for all members of the community. Any person socialistically inclined will ask himself, What does my whole State (Massachusetts, for example) or my nation (the United States, or Russia, or France) produce per day per inhabitant? Taking the wage-earners as about one-third of the population, let each one multiply the average quota per inhabitant for the United States by three and compare it with the wages he himself is receiving. The result is astonishing to most persons who take pains to get an accurate inventory of the products of the nation. According to the last census the total value of farm products, including live stock, amounted to \$1,106 per inhabitant for the whole United States, the manufacturing products to \$1,184, the mining products to \$1,234, making a total in these three great lines for each individual of \$3,524, not quite 32 cents per day, or \$22.15 per week, or \$939 per calendar month. Multiplying by three, to obtain the representation of the average wage-earner, we find that he stands for \$10,572 per week, or \$42,288 per month. The particulars for the several divisions are given in the following table:—

AMOUNT PER DAY PER INHABITANT, BY STATES.\*  
(United States census of 1890.)

Division.						Value farm products.	Value mann- ufactured products.	Value mining products.
						\$	\$	\$
North Atlantic	-	-	-	-	-	·066	·357	·0324
South Atlantic	-	-	-	-	-	·091	·075	·0078
South Central	-	-	-	-	-	·120	·024	·0060
North Central	-	-	-	-	-	·136	·332	·0223
Western	-	-	-	-	-	·141	·152	·1291

Calculating the amount that the whole nation produced in agriculture, mining, manufactures, and transportation, and not subtracting anything for productive power or for rent of real estate or for the interest of capital invested, the total net result which the nation produces in a year is an item of statistics convenient for comparing the actual wealth-producing power of a nation. On this basis the United States would be put at 51½ cents, England 49 cents, France a little less than England, perhaps at 44 cents, and Germany at least 8 cents less than France, namely, at 36 cents. Germany is the most remarkable example of a sudden increase in production brought about by a wise administration of its Government. . . . It would seem from the statistics obtainable that Germany produced about 26 cents per day for each inhabitant in 1870—before the Franco-Prussian war. By diversifying the industries and emancipating themselves from the slavery of purchasing abroad what can be better produced at home the Germans seem to have increased their productive power about 10 cents a day for each inhabitant within the past thirty years.

In the present age natural science is increasingly studied by the people. The secrets of nature are discovered. The most advanced people in nature studies are the ones who lead in the discovery of useful inventions. The forces of nature are turned to advantage to conquer nature for human uses.

With the invention of machinery the mere hand labourer loses his place, and the more intelligent labourer who can direct a machine is employed instead. The mere hand labourer, who may have taken seven years or more of apprenticeship to acquire his trade, finds himself left without an occupation. Unless he can quickly learn how to direct a machine, he is obliged to go to the almshouse.

\* Comparing these figures with those presented by Dr. Harris relating to school attendance, we get the following interesting parallelism :—

Division.						Amount per day per inhabitant.	
						Manufactured products.	Total products.
North Atlantic	-	-	-	-	5·94	·357	·4454
North Central	-	-	-	-	5·28	·332	·4903
Western	-	-	-	-	4·44	·152	·4281
South Atlantic	-	-	-	-	2·68	·075	·1738
South Central	-	-	-	-	2·48	·024	·1500

Great Britain is a nation that has distinguished itself for the invention and employment of useful machinery. It has not succeeded so well in making ornaments as France and Belgium have, but in annihilating distance by steamboats and railroads, and by manufacturing raw materials into cheap but durable articles of use, it has led other nations. One may speak of British industry as constantly undergoing transformation by the substitution of more effective machines than those already in use, and by the substitution of machines for what was done hitherto solely by hand.

The number of paupers in Great Britain is a sort of an index, an economical thermometer, so to speak, which shows the degree of prosperity found in the labouring classes of the community. When there are wars in existence the labouring class engaged in producing food, clothing, and shelter is smaller, having furnished a quota of its number for the army. On the other hand, the Government is buying provisions and clothing in large quantities, and by means of these two causes the prices of provisions and clothing go up. The poor whose incomes have in a period of prosperity been barely sufficient to furnish food, clothing, and shelter, now find them insufficient. During a period of peace it is noticeable that the number of paupers continues to diminish in Great Britain, and after a long period of peace it gets very low, only one-half or even one-fourth of the former number being found on the rolls of paupers.

This phenomenon cannot be observed in the United States for two reasons. The first reason is that the great production of raw materials of food and clothing in the United States does much to make pauperism unnecessary. Secondly, the general education of the people in elementary schools makes the labourer more shifty or versatile, and he takes readily to the direction of machinery. When a useful invention makes his hand labour no longer remunerative he leaves his old vocation and takes up some other one, in most cases becoming a director of machinery. Both of these causes work in the United States to the result of making the number of paupers quite small.

This is the effect of a universal education in common schools. But besides versatility and the power to shift for oneself there is also aspiration. The majority of labourers look beyond their present calling and consider carefully how they can better themselves by engaging in a business that pays them better or a business that requires more intelligence. Common-school education causes aspiration in the labourer and makes him uneasy and restless. This seems to be a bad thing at first. But from another and a higher point of view it is well for the common labourer to aspire for something better. It is desirable that he should goad himself on toward a higher plane of production. The American labourer has thus obtained a reputation for his ability to shift for himself under new circumstances. There is a story told of the enterprising New Englander who by mistake took warming pans to Cuba, where the temperature seldom goes below 70° F. The man is said to have turned his error to advantage by taking off the covers of his warming pans and selling them for molasses dippers. Stupid beginnings are sometimes made, but if the person has education he can get on to his feet some way. The four or five years of education, amounting to eight hundred or one thousand days of instruction, all told, as an average for the American people, gives them the ability to easily change their vocations and find new ones as circumstances require. The phenomenon was illustrated in the twenty prosperous years between 1870 and 1890, when one-fifth of the farmers left their vocation and took up the various branches of manufacturing and commerce.

It is significant in this connection to note the great increase of high schools in the United States. The high school includes the children who are working at the course of study laid out for the ninth to twelfth years of work. Eight years are occupied to complete the course in the elementary school and four years to complete the course in the high school. High schools have increased in the United States until the total number is now



5,315, while nine years ago it was only 2,526. Not only the cities, but also the villages are all getting public high schools so as to instruct all the children who can be spared from their homes to obtain a secondary education, which includes the ninth, tenth, eleventh, and twelfth years of the course of study. It is noteworthy that natural philosophy (often called physics) and chemistry form a large part of the secondary course of study. Natural philosophy enables the boy or girl to understand the nature of force and the construction of machines which turn force to useful purposes.

MANUAL TRAINING IN PUBLIC SCHOOLS.

Within the last few years manual training has been introduced to some extent into the public schools, and quite a number of remarkable schools have been founded in different parts of the country to teach industries.

CITIES IN WHICH MANUAL TRAINING (OTHER THAN DRAWING) WAS TAUGHT IN CONNECTION WITH THE PUBLIC SCHOOLS.

States and Territories.	Years.		
	1890.	1894.	1898.
United States- . . . . .	37	95	152
North Atlantic Division . . . . .	23	52	81
South Atlantic Division . . . . .	3	3	7
South Central Division- . . . . .	1	2	5
North Central Division- . . . . .	10	30	45
Western Division . . . . .	—	8	14
North Atlantic Division :			
Maine . . . . .	—	2	4
New Hampshire . . . . .	1	1	2
Massachusetts . . . . .	6	17	33
Rhode Island . . . . .	—	2	3
Connecticut . . . . .	1	3	7
New York . . . . .	6	10	17
New Jersey . . . . .	4	12	9
Pennsylvania . . . . .	5	5	6
South Atlantic Division :			
Delaware . . . . .	1	1	1
Maryland . . . . .	1	1	1
District of Columbia . . . . .	1	1	1
Virginia . . . . .	—	—	1
North Carolina- . . . . .	—	—	2
Florida . . . . .	—	—	1
South Central Division :			
Kentucky- . . . . .	—	2	3
Tennessee- . . . . .	1	—	—
Mississippi . . . . .	—	—	1
Texas . . . . .	—	—	1
North Central Division :			
Ohio . . . . .	2	3	11
Indiana . . . . .	—	1	2
Illinois . . . . .	2	7	10
Michigan . . . . .	2	2	3
Wisconsin- . . . . .	2	5	8
Minnesota . . . . .	1	4	5
Iowa . . . . .	—	4	3
Missouri . . . . .	—	2	2
Nebraska . . . . .	1	2	1
Western Division :			
Colorado . . . . .	—	2	5
Washington . . . . .	—	2	1
California . . . . .	—	4	8



I give herewith a list in detail of these institutions in the United States from my latest report, which shows the number of pupils in each branch of industry—cooking, blacksmithing, carpentering, sewing, etc. These special schools are founded for the purpose of taking the place of the shiftless methods of apprenticeship. The school differs from apprenticeship by laying a solid basis in science and arithmetic. It enables the pupil not only to understand the machine, but to invent a better one if needed. Even a little smattering of science and geometry is a great help to the pupil.

Although the number of industrial schools is quite limited, being only 110, yet it is rapidly increasing, as eight years ago it was only fifteen.

#### SCHOOLS FOR MANUAL AND INDUSTRIAL TRAINING.

Manual training is by no means a novelty in American schools. Thomas Jefferson recommended it for the students of the University of Virginia, and Benjamin Franklin included it in his plan for an academy in Philadelphia. An active propaganda was carried on in behalf of manual labour in educational institutions for many years, beginning about 1830, and some of our foremost institutions had their origin under its influence.

But what is now known as "manual training" is traced to an exhibit of a Russian institution at the Centennial in 1876. The value of the system of hand training there suggested was recognised by such men as Louis D. Runkle and C. M. Woodward, who became advocates of the new idea and introduced it into the institutions under their charge.

Strong opposition was met among schoolmen for a time, but manual training has steadily grown in popularity, and with growth it has constantly improved in matter and method, and consequently in usefulness.

In 1896 manual training was an essential feature in the public-school course of ninety-five cities. In 359 institutions other than city schools there is training which partakes more or less of the nature of manual training, and which belongs in a general way to the same movement. These institutions embrace almost every class known to American education, and the manual features vary from the purely educational manual training of the Teachers College in New York City to the direct trade instruction of the apprentice schools.

In many cases the legislatures have taken cognisance of the movement. Massachusetts requires every city of 200,000 inhabitants to maintain high-school manual-training courses approved by the State board of education; Maine authorises any city or town to provide instruction in industrial or mechanical drawing to pupils over fifteen years of age; industrial training is authorised by general laws in Connecticut, Georgia, Indiana (in cities of over 100,000 population), New Jersey, New York, Utah, Wisconsin, and Wyoming. Congressional appropriations are regularly made for manual training in the District of Columbia.

In the report of this office for the year 1893-94 a chapter was devoted to the statistics of manual and industrial training, pages 2093 to 2169. To the same report Professor C. M. Woodward, Director of the Manual Training School of Washington University, St. Louis, Mo., contributed a chapter on "The rise and progress of manual training," pages 877 to 949. In the 1895-96 Report, pages 1001 to 1152, is an examination of the courses of instruction in typical institutions offering manual or industrial training.

In the following pages is printed a list of the leading manual-training schools in the United States with their statistics for the scholastic year 1896-97. Table 1 gives the statistics of 66 manual and industrial training schools and 24 industrial schools for Indian children reporting to this office. In the 66 manual and industrial training schools there were 551 teachers, 289 males and 262 females. These schools had 19,841 pupils in industrial and manual training, 12,123 males and 7,718 females. The amount of money paid to teachers in 48 of these schools was \$288,890; the amount spent for materials by 41 of the schools was \$43,889; the amount spent by 35 schools for new tools and repairs was \$37,139; the amount for

incidentals for 30 schools was \$43,905, and the total expenditure reported by 54 of the 66 schools was \$475,787.

In the 24 Indian schools there were 286 teachers, 132 males and 154 females; 4,555 pupils, 2,645 males and 1,910 females. The amount paid to teachers was \$101,465 for 18 of the schools, and the total expenditure for the same schools was \$145,159.

In the first column of the table the grade of literary instruction in each school is indicated. More than 30 of the 66 institutions are of high-school grade. The literary instruction in 9 of the Indian schools is also of secondary grade. The following table gives for each school a statement in detail showing the number of pupils in each branch of manual or industrial training, the number of instructors in each branch, and the number of weeks devoted to each subject during the entire course. [As all returns are not as clear as the first and fourth, total teachers giving industrial training are added in first column. Evidently many of these are not exclusively industrial teachers.—H. T. M.]

SOME STATISTICS OF MANUAL AND INDUSTRIAL TRAINING—BRANCHES TAUGHT. (SELECTED AND CONDENSED FROM TWO TABLES.)

Name of institution.	Branch of instruction.	Number of instructors.	Number of pupils.		Number of weeks the subject is studied during the entire course.
			Male.	Female.	
1	2	3	4	5	6
Central School (public), Oakland, Cal.— (Secondary.) 3 teachers.	Free hand and mechanical drawing.	1	142	90	41
	Sewing - - - - -	1	—	120	41
	Cooking - - - - -	1	—	84	41
	Carpentry - - - - -	1	137	—	41
	Wood-turning - - - - -	1	62	—	41
California School of Mechanical Arts, San Francisco, Cal.—(Secondary.) 7 teachers.	Carving - - - - -	—	—	108	41
	Free-hand drawing - - - - -	2	108	64	30
	Mechanical drawing - - - - -	1	108	94	30
	Clay modelling - - - - -	1	99	36	40
	Sewing - - - - -	1	—	64	30
	Cooking - - - - -	1	—	11	40
	Carpentry - - - - -	1	99	—	20
	Carving - - - - -	1	99	28	40
	Pattern-making - - - - -	1	99	—	20
	Forging - - - - -	1	99	—	30
	Moulding (metal)- - - - -	1	99	—	10
	Vise work - - - - -	1	44	—	20
Manual Training High School, Denver, Colo.—(Secondary.) 8 teachers.	Free hand drawing - - - - -	1	180	129	114
	Mechanical drawing - - - - -	1	180	129	114
	Clay modelling - - - - -	1	44	35	16
	Sewing - - - - -	2	—	98	70
	Cooking - - - - -	1	—	62	38
	Carpentry - - - - -	1	80	93	16
	Wood turning - - - - -	1	80	—	12
	Carving - - - - -	1	80	50	20
	Pattern-making - - - - -	1	44	—	12
	Forging - - - - -	1	44	—	20
	Sheet metal work - - - - -	1	44	—	2
	Moulding - - - - -	1	44	—	4
	Vise work - - - - -	1	—	—	8
	Machine-shop work - - - - -	1	—	—	30
Chicago Manual Training School, Chi- cago Ill.—(Secondary) 5 teachers.	Free-hand drawing - - - - -	1	—	—	120
	Mechanical drawing - - - - -	1	261	—	120
	Carpentry - - - - -	—	—	—	—
	Wood-turning - - - - -	1	100	—	40
	Pattern-making - - - - -	—	—	—	—
	Forging - - - - -	1	108	—	—
	Moulding (metal)- - - - -	1	—	—	—
	Vise work - - - - -	1	44	—	40
	Machine-shop work - - - - -	—	—	—	—

## STATISTICS OF MANUAL AND INDUSTRIAL TRAINING, ETC.—Continued.

Name of Institution.	Branch of Instruction.	Number of Institutions.	Number of pupils.		Number of weeks this subject is studied during the entire course.
			Male.	Female.	
1	2	3	4	5	6
Jewish Training School, Chicago, Ill.— (Elementary and Secondary.) 7 teachers.	Free-hand drawing	1	350	350	40
	Mechanical drawing	1	350	350	40
	Clay modelling	1	150	150	40
	Paper-cutting and folding	1	300	300	40
	Sewing	1	—	350	40
	Carpentry	2	400	200	40
	Wood turning	1	50	—	40
	Carving	1	50	—	40
	Pattern-making	1	30	—	40
	Vise work	1	30	—	40
	Machine-shop work	1	30	—	40
	Painting	2	24	45	40
	Designing	1	60	60	40
Manual Training School, Springfield, Ill.—(Elementary.) 1 teacher.	Free-hand drawing	1	58	—	40
	Mechanical drawing	1	58	—	40
	Floyd or kufle work	1	58	—	40
	Carpentry	1	58	—	40
	Wood-turning	1	58	—	40
Industrial Training School, Indianapolis, Ind.—(Secondary.) 10 teachers.	Free-hand drawing	3	204	52	40
	Mechanical drawing	2	162	2	—
	Sewing	4	—	145	—
	Cooking	2	—	60	—
	Carpentry	2	95	—	—
	Wood turning	2	54	—	—
	Pattern-making	2	44	—	40
	Forging	2	91	—	—
	Moulding (metal)	1	44	—	—
	Machine-shop work	1	17	—	—
	Sewing	2	3	30	—
Indiana Soldiers' and Sailors' Orphans' Home, Knightstown, Ind.—(Elementary) 12 teachers.	Cooking	1	—	27	—
	Carpentry	1	4	—	—
	Machine-shop work	1	11	—	—
	Baking	1	13	—	—
	Farm or garden work	3	29	—	—
	Printing	1	32	—	—
	Shoemaking	1	10	—	—
	Floriculture	1	19	—	—
	Free-hand drawing	2	165	—	—
	Mechanical drawing	2	165	—	100
Manual Training School for Boys, Cambridge, Mass.—(Secondary) 8 teachers.	Carpentry	2	60	—	20
	Wood turning	1	42	—	20
	Pattern-making	1	42	—	20
	Forging	1	42	—	20
	Moulding	1	42	—	—
	Vise work	1	42	—	20
	Machine-shop work	1	48	—	60
	Textile manufacturing processes	7	191	—	—
	Designing	4	30	9	—
	Textile chemistry and dyeing	2	23	1	—
Lowell Textile School, Lowell, Mass.—(Trade School; no literary instruction) 12 teachers.	Free hand drawing	2	236	—	20
	Mechanical drawing	2	236	—	100
	Carpentry	2	90	—	20
	Wood turning	2	90	—	10
	Carving	2	90	—	10
	Pattern-making	1	70	—	10
	Forging	1	70	—	25
	Sheet-metal work	1	70	—	5
	Moulding	1	70	—	10
	Vise work	1	50	—	10
Manual Training School of Washington University, St. Louis, Mo.—(Secondary) 6 teachers.	Machine-shop work	1	50	—	20
	Mechanical drawing	1	105	—	40
	Clay modelling	1	215	150	40
	Paper-cutting and folding	6	180	136	40
	Sewing	2	—	30	40
Brooklyn Industrial School Association, Brooklyn, N. Y.—(Elementary.) 12 teachers.	Free-hand drawing	1	105	—	40
	Mechanical drawing	1	215	150	40
	Clay modelling	1	215	150	40
	Paper-cutting and folding	6	180	136	40

## STATISTICS OF MANUAL AND INDUSTRIAL TRAINING, ETC.—Continued.

Name of institution.	Branch of instruction.	Number of instructors.	Number of pupils.		Number of weeks the subject is studied during the entire course.
			Male.	Female.	
1	2	3	4	5	6
Brooklyn Industrial School Association, Brooklyn, N.Y.—(Elementary.) —Cont.	Cooking . . . . .	4	—	50	24
	Sloyd . . . . .	1	105	—	40
	Cobbling . . . . .	1	53	—	59
	Free-hand drawing . . . . .	2	58	50	—
Industrial School Association, Brooklyn, N.Y.—(Elementary.) 6 teachers.	Paper-cutting and folding . . . . .	3	56	40	41
	Sewing . . . . .	4	—	180	41
Manual Training High School, Brooklyn, N.Y.—(Secondary.) 8 teachers.	Free-hand drawing . . . . .	2	—	—	100
	Mechanical drawing . . . . .	2	—	—	100
	Sewing . . . . .	2	—	—	80
	Cooking . . . . .	1	—	—	40
	Carpentry . . . . .	1	—	—	20
	Wood-turning . . . . .	1	—	—	20
	Carving . . . . .	1	—	—	20
	Pattern-making . . . . .	1	—	—	20
	Forging . . . . .	1	—	—	40
	Sheet-metal work . . . . .	1	—	—	20
	Free-hand drawing . . . . .	2	80	115	144
	Mechanical drawing . . . . .	2	80	115	144
	Sewing . . . . .	2	—	115	80
	Cooking . . . . .	1	—	14	20
Pratt Institute High School, Brooklyn, N.Y.—(Secondary.) 10 teachers.	Carpentry . . . . .	1	45	—	71
	Wood-turning . . . . .	1	45	—	12
	Pattern-making . . . . .	1	45	—	12
	Forging . . . . .	1	20	—	12
	Sheet-metal work . . . . .	1	20	—	6
	Moulding . . . . .	1	20	—	12
	Vise work . . . . .	1	14	—	12
	Machine-shop work . . . . .	1	14	—	24
	Carpentry . . . . .	1	18	—	24
	Plumbing . . . . .	1	19	—	24
	Machine-shop work . . . . .	1	22	—	24
	Painting . . . . .	1	17	—	24
	Free-hand drawing . . . . .	1	114	97	—
	Mechanical drawing . . . . .	1	32	26	—
Ethical Culture Schools, New York, N.Y.—(Elementary and Secondary.) 3 teachers.	Clay modelling . . . . .	1	114	97	—
	Paper-cutting and folding . . . . .	3	40	41	—
	Sewing . . . . .	1	70	96	—
	Sloyd . . . . .	1	32	23	—
	Carpentry . . . . .	1	26	—	—
	Wood-turning . . . . .	1	14	—	—
	Carving . . . . .	1	18	—	—
	Mechanical drawing . . . . .	2	—	—	—
	Carpentry . . . . .	4	37	—	—
	Forging . . . . .	1	12	—	—
New York Trade School, New York, N.Y. (No literary instruction.) 23 teachers.	Sheet-metal work . . . . .	1	90	—	—
	Steam-fitting . . . . .	2	9	—	—
	Bricklaying . . . . .	1	52	—	—
	Printing . . . . .	2	17	—	—
	House-painting . . . . .	2	16	—	—
	Fresco-painting . . . . .	2	22	—	—
	Sign-painting . . . . .	2	22	—	—
	Plastering . . . . .	1	9	—	—
	Plumbing . . . . .	6	256	—	—
	Electricity . . . . .	2	32	—	—
	Free-hand drawing . . . . .	1	48	—	53
	Mechanical drawing . . . . .	1	80	—	33
	Paper-cutting and folding . . . . .	1	25	—	33
	Sloyd . . . . .	1	50	—	33
St. George's Evening Trade School New York, N.Y.—(Secondary.) 7 teachers.	Carpentry . . . . .	1	80	—	33
	Wood-turning . . . . .	1	20	—	33
	Pattern-making . . . . .	1	80	—	33
	Plumbing . . . . .	1	48	—	33
	Printing . . . . .	1	52	—	33
	Free-hand drawing . . . . .	4	4	75	100
	Mechanical drawing . . . . .	2	45	55	200
Teachers College, New York, N.Y.—(Elementary, Secondary, and College.) 20 teachers.	Clay modelling . . . . .	1	8	22	40

## STATISTICS OF MANUAL AND INDUSTRIAL TRAINING, ETC.—Continued.

Name of Institution	Branch of instruction.	Number of instructors.	Number of pupils.		Number of weeks the subject is studied during the entire course.
			Male.	Female.	
1	2	3	4	5	6
Teachers' College, New York, N.Y.— (Elementary, Secondary, and College.) (Cont.)	Paper-cutting and folding . . . . .	2	13	12	33
	Sewing . . . . .	5	40	156	145
	Cooking . . . . .	2	—	62	30
	Sloyd . . . . .	1	8	59	38
	Carpentry . . . . .	1	68	9	34
	Wood-turning . . . . .	1	68	—	21
	Carving . . . . .	1	8	55	80
	Pattern-making . . . . .	1	68	—	13
	Forging . . . . .	1	45	—	8
	Vise work . . . . .	1	45	—	4
	Machine-shop work . . . . .	1	45	—	18
	Sewing . . . . .	1	—	100	40
	Cooking . . . . .	1	—	14	16
	Kitchen-gardening . . . . .	1	—	108	32
	Free-hand drawing . . . . .	6	104	112	30-90
Huntsdon Athenaeum and Mechanics Institute, Huntsdon, N.Y.—(Second- ary.) 24 teachers.	Mechanical drawing . . . . .	3	250	13	90
	Clay modelling . . . . .	1	11	9	30
	Sewing . . . . .	9	—	512	30
	Cooking . . . . .	2	—	270	36
	Carpentry . . . . .	2	287	10	34
	Wood-turning . . . . .	1	24	—	16
	Architectural drawing- Design . . . . .	2	36	2	90
	Plumbing . . . . .	3	45	38	90
	Electricity . . . . .	2	30	—	30
	Free-hand drawing . . . . .	1	68	—	30
	Mechanical drawing . . . . .	1	194	—	25
	Sloyd . . . . .	1	194	—	15
	Carpentry . . . . .	1	35	—	40
	Wood-turning . . . . .	1	70	—	30
	Forging . . . . .	1	70	—	10
Technical School of Cincinnati, Cincin- nati, Ohio.—(Secondary.) 4 teachers.	Forging . . . . .	1	59	—	40
	Vise work . . . . .	1	30	—	20
	Machine-shop work . . . . .	1	30	—	20
	Free-hand drawing . . . . .	1	30	40	40
	Mechanical drawing . . . . .	2	42	—	40
	Clay modelling . . . . .	1	68	—	40
	Paper-cutting and folding . . . . .	1	68	—	40
	Sewing . . . . .	1	68	—	40
	Cooking . . . . .	2	—	222	40
	Carpentry . . . . .	1	38	—	40
	Wood-turning . . . . .	1	13	—	40
	Carving . . . . .	1	6	—	40
	Forging . . . . .	1	6	—	40
	Machine-shop work . . . . .	1	6	—	40
	Free-hand drawing . . . . .	1	—	—	40
Central Manual Training School, Phila- delphia, Pa. (Secondary.) 5 teachers.	Mechanical drawing . . . . .	1	—	—	40
	Clay modelling . . . . .	1	—	—	13
	Carpentry . . . . .	1	—	—	40
	Wood-turning . . . . .	1	—	—	13
	Carving . . . . .	1	—	—	13
	Pattern-making . . . . .	1	—	—	40
	Forging . . . . .	1	—	—	40
	Sheet-metal work . . . . .	1	—	—	13
	Moulding . . . . .	1	—	—	13
	Vise work . . . . .	1	—	—	13
	Machine-shop work . . . . .	1	—	—	40
	Mechanical drawing . . . . .	1	575	—	112
	Carpentry . . . . .	1	575	—	112
	Wood-turning . . . . .	1	575	—	112
	Pattern-making . . . . .	1	575	—	112
Central College, Philadelphia, Pa. (Primary, Secondary.) 8 teachers.	Forging . . . . .	1	575	—	112
	Moulding . . . . .	1	575	—	112
	Vise work . . . . .	1	575	—	112
	Machine-shop work . . . . .	1	575	—	112
	Electricity . . . . .	1	575	—	112
	Plumbing . . . . .	1	575	—	112

## STATISTICS OF MANUAL AND INDUSTRIAL TRAINING, ETC.—Continued.

Name of institution.	Branch of instruction.	Number of instructors.	Number of pupils.		Number of weeks the subjects studied during the entire course.
			Male.	Female.	
1	2	3	4	5	6
<b>INDUSTRIAL SCHOOLS FOR INDIAN CHILDREN</b> —(Selected.) Fort Mojave Indian Industrial School, Fort Mojave, Ariz.—(Secondary.) 19 teachers.	Free-hand drawing	4	100	60	40
	Clay modelling	2	41	32	40
	Paper-cutting and folding	1	21	11	40
	Sewing	2	—	60	40
	Cooking	1	—	20	40
	Sloyd	1	14	—	40
	Carpentry	1	7	—	40
	Carving	1	3	—	40
	Forging	—	3	—	40
	Farm or garden work	—	32	—	40
	Bricklaying	—	15	—	40
	Painting	—	7	—	40
	Baking	1	5	—	40
	Free-hand drawing	1	50	25	—
<b>Indian Industrial School, Phoenix, Ariz.</b> —(Secondary.) 9 teachers.	Clay modelling	1	20	20	—
	Paper-cutting and folding	1	20	20	—
	Sewing	4	—	100	—
	Cooking	2	10	75	—
	Sloyd	1	20	20	—
	Carpentry	1	12	—	—
	Wood-turning	1	10	10	—
	Carving	1	10	10	—
	Forging	1	12	—	—
	Vise work	1	12	—	—
	Machine-shop work	1	12	—	—
	Farm or garden work	2	20	—	—
	Bricklaying	1	6	—	—
	Painting	1	10	—	—
<b>Fort Yuma Indian School, Yuma, Ariz.</b> —(Elementary.) 5 teachers.	Sewing	1	—	—	40
	Cooking	1	—	—	40
	Carpentry	1	—	—	40
	Farm or garden work	1	—	—	—
	Shoemaking	1	—	—	40
	Sewing	1	—	95	52
<b>Indian School, Ferris, Cal.—(Secondary.)</b> 5 teachers.	Cooking	1	—	95	52
	Carpentry	1	95	—	52
	Carving	1	95	—	52
	Farm or garden work	1	95	—	52
	Bricklaying	1	95	—	52
	Painting	1	95	—	52
<b>Fort Lewis Indian Industrial School,</b> <b>Hesperus, Colo.—(Secondary.)</b> 9 teachers.	Free-hand drawing	8	—	—	—
	Mechanical drawing	—	—	—	—
	Clay modelling	2	—	—	—
	Paper-cutting and folding	1	—	—	—
	Sewing	1	—	—	—
	Cooking	1	—	—	—
	Sloyd	1	—	—	—
	Carpentry	1	—	—	—
	Forging	—	—	—	—
	Sheet-metal work	—	—	—	—
	Moulding	2	—	—	—
	Vise work	—	—	—	—
	Machine-shop work	—	—	—	—
	Farm or garden work	2	—	—	—
<b>United States Indian School, Alhambra,</b> <b>Albuquerque, N. Mex.—(Elementary.)</b> 10 teachers.	Printing	1	—	—	—
	Painting	2	—	—	—
	Paper-cutting and folding	1	12	12	40
	Sewing	1	—	25	—
	Cooking	1	—	20	—
	Carpentry	1	14	—	—
	Carving	1	24	—	—
	Farm or garden work	1	24	—	—
	Laundry	1	—	15	—
	Tailoring	2	12	—	—
	Shoemaking	1	12	—	—
	Harness-making	1	12	—	—



## STATISTICS OF MANUAL AND INDUSTRIAL TRAINING, ETC.—Continued.

Name of institution.	Branch of instruction.	Number of instructors.	Number of pupils.		Number of weeks the subject is studied during the entire course.
			Male	Female	
1	2	3	4	5	6
United States Indian Industrial School, Santa Fé, N. Mex.—(Secondary.) 12 teachers.	Sewing - - - - -	2	—	—	—
	Cooking - - - - -	1	—	—	—
	Carpentry - - - - -	1	—	—	—
	Forging - - - - -	1	—	—	—
	Farm or garden work - - - - -	1	—	—	—
	Painting - - - - -	1	—	—	—
	Laundry - - - - -	1	—	—	—
	Baking - - - - -	1	—	—	—
	Nursing - - - - -	1	—	—	—
	Leather work - - - - -	1	—	—	—
	Housekeeping - - - - -	1	—	—	—
	Engineering - - - - -	1	—	—	—
United States Indian Industrial School, Carlisle, Pa. (Elementary and (?) Secondary.) 19 teachers.	Free-hand drawing - - - - -	1	454	600	—
	Mechanical drawing - - - - -		27	36	—
	Clay modelling - - - - -		23	30	—
	Paper-cutting and folding - - - - -		40	62	—
	Sewing - - - - -	1	—	400	—
	Cooking and baking - - - - -	2	12	400	—
	Shoed - - - - -	1	77	33	—
	Carpentry - - - - -	1	42	—	—
	Forging and vise work - - - - -	1	84	—	—
	Sheet-metal work - - - - -	1	13	—	—
	Farm or garden work - - - - -	2	461	—	—
	Bricklaying and plastering - - - - -	1	12	—	—
	Printing - - - - -	1	23	2	—
	Painting - - - - -	1	4	—	—
	Dairying - - - - -	1	—	—	—
	Tailoring - - - - -	1	60	—	—
	Steam-fitting - - - - -	1	4	—	—
United States Indian School, Wittenberg, Wis. (Secondary.) 7 teachers.	Harness-making - - - - -	1	44	—	—
	Rhoemaking - - - - -	1	40	—	—
	Laundry - - - - -	1	—	400	—
	Free-hand drawing - - - - -	2	90	21	—
	Paper-cutting and folding - - - - -	1	16	14	—
	Sewing - - - - -	1	—	16	—
	Cooking - - - - -	1	—	16	—
	Carpentry - - - - -	1	15	—	—
	Farm or garden work - - - - -	1	25	—	—
	Painting - - - - -	1	6	—	—

It must be remembered that a population that is entirely engaged in agriculture may double or treble its production by transferring one-half of its agriculturists to the work of manufacture and commerce. A home market for the products of agriculture increases the amount of money paid to the producer, so that fewer farmers earn more money than the large number of farmers earned before. According to the census of 1890, Massachusetts earned between three and four cents per day for each inhabitant by agriculture, but it produced nearly 51 cents per day by its manufactured products and its commerce. The value of its mining products was only one-half of a cent per day. The farm products of South Carolina amounted to 12½ cents a day for each inhabitant, but the manufacturing products amounted to only 3 cents a day and the mining a little less than 1 cent a day. It is likely that an increase of manufactured products in South Carolina would also have raised the value of the agricultural products by increasing home consumption.

The question arises whether a nation may indefinitely increase its products or whether it will soon find a hard limit. The answer is that a regular

increase is possible during the transfer of a portion of the agricultural work to manufacturing and commerce, and also an increase by the transfer of persons engaged in the crude processes of manufacture to those manufactures requiring a high degree of skill and more cultivation of taste in the labourer. There is a continued increase in the amount produced by the individual when his community gains a supply of machinery and the requisite buildings for manufacture and employs more steam engines or improved water wheels. The United States, assisted by something like 20,000,000 horse-power of steam engines, increases its annual product per inhabitant. The era of machinery has just begun. In time the majority of processes on the farm that now require mere hand labour will be performed by machinery. It is of interest to notice that although Italy is a country of marvellous fertility, its entire agriculture is not sufficient to furnish large average incomes for its people. It has comparatively few steam engines, comparatively few manufactories. The result is summed up by saying that in Great Britain thirty families out of every hundred receive \$1,000 or more income per annum, while in Italy only three families out of every hundred receive the same amount. The economical effort which promises most to the Italians aims at the increase of manufactures.

Q. (By Mr. A. L. Harris.) Can you inform the Commission how many States have provided for the children in the rural districts?—A. Many of the States have recently undertaken to improve their rural schools, mostly consisting of sparsely populated districts and enrolling from ten to twenty pupils in each school. Ohio itself has done a great deal in this matter, following the example of Kingsville, in Ashtabula County. It has also made a law, called the Boxwell law, which provides for certificates of graduation for pupils in rural schools of Ohio, and makes possible their further education in high schools at the expense of the State.

Q. (By Mr. Farquhar.) In what States is the conveyance of children to school provided for by legislation, and the State leading in the movement?—A. The free transportation of pupils to well-graded schools in the centre of the town began less than thirty years ago, and within the last four years the movement has spread rapidly to other parts of the United States.

I offer the following statistical information showing the States in which the plan has been adopted and other items of interest. The plan has the advantage that it gives a better grade of instruction to the pupils at a smaller cost than the former plan:—

## FREE TRANSPORTATION OF PUPILS.

Since.	State.	By—	Remarks.
1869	Massachusetts	Town	—
1888	Vermont	do.	Not exceeding 25 per cent. of the school money.
1891	New Hampshire	do.	do.
1893	Connecticut	do.	Discontinuing small school.
1893	Maine	do.	do.
1894	New Jersey	District	Unable to attend because living remote.
1895	Ohio	Town	In certain counties only by special laws.
1896	New York	District	To other district or city*

\* Especially for grades higher than in the home school.

FREE TRANSPORTATION OF PUPILS—*Continued.*

Since.	State.	By—	Remarks.
1897	Iowa - - -	School corporation	For economy and advantage.
1897	Nebraska -	District - - -	To other districts.
1897	Pennsylvania -	do. - - -	For those made distant by closing small school, and not above cost of small school.
1897	South Dakota -	do. - - -	Living at an unreasonable distance.
1897	Wisconsin -	do. - - -	Living distant 1½ miles.
1898	Rhode Island -	Town - - -	In practice earlier.
1899	North Dakota -	District - - -	By two-thirds of votes cast.

Appended are extracts from the report of the committee of twelve on rural schools to the National Educational Association, July 9th, 1895.

The first extract is from the report of the sub-committee on instruction and discipline :—

“ It was Massachusetts that led the way in developing the district system, and it is Massachusetts that is leading the way in consolidation. An Act that dates from 1869 authorises any town in the Commonwealth to raise money by taxation to enable the school committee, in its discretion, to provide for the conveyance of pupils to and from the public schools at public cost. The towns were already empowered to build schoolhouses wherever they were really needed. Availing themselves of these powers, many towns have entered upon the work of consolidating their schools. How the work goes on is shown by the following table, exhibiting the sums of money paid for public-school transportation for a series of years :—

Year.	Amount.	Year.	Amount.
	\$		\$
1888-89 - - -	22,118·38	1892-93 - - -	50,590·41
1889-90 - - -	24,145·12	1893-94 - - -	63,617·68
1890-91 - - -	30,648·68	1894-95 - - -	76,608·29
1891-92 - - -	38,726·07	1895-96 - - -	91,136·11

“ The movement has extended beyond Massachusetts and reached every one of the New England States. In these States many hundreds of schools have been consolidated, and with the most gratifying results. Occasionally an unsuccessful experiment is reported, but the great stream of testimony runs strongly the other way. Longer school terms, better teachers, better grading, better instruction, more interest in the pupils, greater physical comfort on the part of the children, better supervision—these are the claims that are made for the new departure. Other things being equal, the new way is never more expensive than the old one, and often it is less expensive.

“ The movement has spread beyond New England. In 1894 a law was enacted in New Jersey providing for the transportation of pupils at public expense, in order that rural schools might be consolidated with city ones. A most interesting experiment in consolidation is being tried in north eastern Ohio, where some schools had already died out and many more were lingering on the verge of death. Permissive legislation has been obtained in several counties, and already many townships are working the plan successfully, while many others are looking on expectantly and are apparently on the point of making the new departure. The newspapers are quick to note the innovation, and it is already attracting attention beyond the borders of the State.

"The distinct pedagogical advantages of consolidation are much more fully set forth in the reports on supply of teachers and instruction and discipline than here. In this report the topic is dealt with mainly as it is related to organisation and administration. The fact is, however, the several aspects of consolidation are inseparably connected. As a rule, whatever promotes simplicity and ease of administration promotes good instruction, and *vice versa*. No one of the sub-committees that handle the subject for a moment supposes that there is any charm in the word "consolidation" to cast all the evil spirits out of the rural school, but they all believe, after giving the subject mature consideration, that great possibilities of improvement lie in that direction. It is perfectly true that the consolidation remedy cannot be universally applied, because physical and social conditions often forbid. The fact is that a large proportion of the children of the land will be schooled in little schools—rural schools, ungraded schools—or they will not be schooled at all. Suggestions looking to the improvement of these schools will be found in the reports of all the sub-committees, but insistence is here placed upon the fact that the consolidation remedy can be applied on a grand scale, with the largest promise of success.

"In most States some new legislation will be necessary to that end, but not in all. Wherever the township-unit system exists the first step, and the long step, has already been taken. In such States it should not be difficult to secure the needed legislation in relation to transportation. State Superintendent Emery, of Wisconsin, has already notified the people of his State that the laws contain all the provisions that are necessary to enable them to move at once in the direction of school consolidation.

"It is important that the consolidation reform shall not be misunderstood. It does not necessarily mean that there shall be only one school in a town or township. It does not mean either that parts of different townships or counties shall not be comprised in one school. These questions are merely matters of detail and their adjustment will depend upon such factors as the size of townships, the distribution of villages or other local centres, the direction and condition of roads, streams, and bridges, the distribution of population, and the physical configuration of the township and the adjacent parts of the country. . . .

"It is noteworthy, let it be remarked again, how different social elements tend to attract one another and so to coalesce. School consolidation, especially its practicability, turns largely upon means of cheap, safe, and easy communication throughout the school area. Here we touch a question intimately relating to social progress that has been receiving increasing attention the last few years. Reference is made to the improvement of roads. Those who have been promoting this movement have not probably regarded it as a measure of educational reform; but such it is. Perhaps there is no rural interest of a social nature that would be more decidedly enhanced by good roads than the educational interest. The people of some of the towns of Ohio, where the new plan is being tried, claim this as a decided advantage, that the drivers of the omnibuses serve as carriers for the mails between the farmhouses and the post-offices, thus promoting the diffusion of intelligence in still another way."

The second extract is from the report of the sub-committee on maintenance:—

"*Transportation to Central Schools.*—The collection of pupils into larger units than the district school furnishes may be accomplished under favourable circumstances by transporting at State or local expense all the pupils of the small rural districts to a central graded school and abolishing the small ungraded school. This is the radical and effective measure which is to do great good in many sections of each State. As shown already by the sub-committee on the maintenance of schools, Massachusetts, in which the plan began under the town superintendent of Concord, Mr. John B. Tileston (about the year 1878 in Concord, or even earlier in the town of Quincy),

paid in 1894-95 the sum of \$76,608 for the transportation of children from small rural schools to central graded schools—213 towns out of a total of 353 towns and cities, using this plan to a greater or less extent, and securing the twofold result of economy in money and the substitution of graded for ungraded schools. The spread of this plan to Maine, Vermont, New Hampshire, Connecticut, Rhode Island, New Jersey, Ohio, and some other States (see Report of Bureau of Education for 1894-95, pp. 1469-1482) demonstrates its practicability. Experiments with this plan have already suggested improvements, as in the Kingsville experiment in Ohio, where the transportation reached in all cases the homes of the pupils, and yet reduced the cost of tuition from \$22.75 to \$12.25 a year for each of the fifty pupils brought to the central school from the outlying districts.

*Improvement of Roads.*—Wherever this plan of abolishing the small ungraded school is practicable it is by far the best remedy to be applied.

“But there will remain large numbers of small ungraded rural schools in which the plan of transportation is not feasible by reason of great distances and poor roads. The Agricultural Department is seconding the efforts of many States to improve roads in rural districts. In many places road improvement is a necessary condition previous to the betterment of rural schools.”

Massachusetts, Ohio, and some other States have provided for the transportation of pupils from sparsely settled districts to the large schools in villages centrally situated. It is found that the cost of transportation is more than saved by the amount saved in wages of teachers, fewer teachers being able to do better work under the new plan than the more numerous teachers under the old plan.

Q. (By Mr. C. J. Harris.) What is the local transportation—taking them to the school?—A. Yes; the children are transported in a covered conveyance, a sort of omnibus, which is called in the towns in Massachusetts a “barge,” which goes to the remote parts of the district and takes up the children in the morning, conveys them to school, and returns them to their residences in the afternoon at the close of school.

Q. (By Mr. Smyth.) Have you no statistics or information relative to the education of negroes in the South? Have you any suggestion to make to the commission for technical or manual schools for the coloured population? Is it not a more important education than high schools? Is it better suited for that race—technical education?—A. The increase of children in coloured schools in the South is shown in the following figures for the past twenty-one years. In 1876 less than 600,000 children were enrolled in the South Atlantic and the South Central States. The past year the number has risen to 1,460,000. There are remarkable schools for the training of coloured teachers, especially at Hampton, Va.; Atlanta, Ga.; Claflin University, in South Carolina; Fiske University, at Nashville, Tenn.

The aggregate amount paid from public taxes for coloured education in the Southern States during the past twenty-six years is about \$100,000,000. The increase in enrolment in coloured schools has been in excess of the increase in population. So, too, has the enrolment of white children in the South. The amount of public money expended for education of both races in the year 1897 was upward of \$31,000,000.

I should certainly say that it is desirable to increase technical and manual training schools for the coloured population of the South, but I would not disparage the education in the ordinary branches of the high schools which, as I have stated, deal with mathematics, natural philosophy, and other branches of physical science, and languages. The language studies help to give an insight into human nature and to make a government by public opinion possible. The mathematics and natural sciences help to conquer nature and to give industrial ability. The total number of coloured students in the high schools of the South amounts to something over 15,000, and



the total in colleges and higher education, including the secondary education in their preparatory departments, is 45,400. About 2,500 of the students are in the old-fashioned classical course of study, learning languages and mathematics chiefly. The number in scientific courses is nearly 1,000, while the number of students in what are called the branches of English education is 11,000. Thirteen thousand six hundred coloured pupils are receiving industrial training . . . . 1,000 of these are learning farm work, 1,500 are learning carpentry, a little over 500 are learning blacksmithing, machine work, and work in metals, nearly 700 are learning printing, nearly 7,000 are learning sewing, and 2,500 learning cooking. I think that special pains should be taken to encourage industrial training throughout the South, not only in the coloured schools, but in the white schools, for the manufactures that are springing up at every village centre in the South need skilled labour, and there is a surplus population not needed on the farms which should be drawn into the mills. Doubtless inventions will be made such as will reduce the hand labour necessary to cultivating and harvesting the staple crops. This will cause a readjustment of vocations and the increase of labour in manufactures and commerce.

The question of over-production comes up frequently in dealing with this question of the transfer of labour from the production of raw material to the vocations of manufacturing and commerce. What is the exact proportion of the different industries so adjusted that there will be no over-production or under-production? It is obvious at the outset that any given industry now in existence may be made to over-produce by transferring all the labour of the community into that particular field, and by that transfer all of the other industries would be under-supplied. It is possible in a community to furnish more raw material than is needed in that community. When that is the case, it is desirable that some of the labour should be transferred from the production of raw material to its manufacture and exchange. But, again, by such transfer the labourers who produce the necessities in food, clothing, and shelter (the goods that are cheap and durable) may produce more than is needed in that sphere. But there is a class of manufactures, the list of which is always growing larger, which provides articles of creature comfort, and besides these there is labour which tends to the protection of the community in health and in the safety of person and property. Thus, as fast as the labourers can be spared from the production of the raw material and from the manufacture of the necessary articles in clothing and shelter, they enter the occupations that relate to amusement and recreation, and the profession of medicine; all these deal with the protection of health; and besides these occupations they enter upon the legal profession, the insurance of goods, insurance against fire, and against accidents and death, these things being devoted to the protection of property and life. Besides these, the officials managing public works, and those who administer public charities, and the officers of the government of the people (these occupations too, dealing with protection) increase and multiply. Besides these two general classes of occupations which relate first to luxury and creature comfort and require a higher order of educated, technical skill, and secondly, to the means of protection there is a higher order of occupations which have to do with the moral and religious culture, the intellectual education of the people, the trades that supply ornament on useful goods and make the works of fine art, or occupations that deal with the collection and diffusion of information, the editing and printing of books, the operating of the telegraph, and lastly, the pursuit of science and the invention of devices useful in the arts. I have already quoted freely from an article in which I have described this transfer of labourers from the production of necessities to the industries that deal with creature comfort, protection, and culture.

What I have said regarding the education of the coloured race holds with reference to the education of the Indians. The Indian has had hitherto



the tribal form of civilisation. The defect of the tribe is that it does not permit the rise of combinations large enough to give free development to productive industry, and it does not permit the ownership of land in severalty. Major Pratt's Indian school at Carlisle teaches the Indian to desire individual ownership of farms and shops, and to specialise his industry in shoemaking, the making of harnesses, the cooking of food, the making of clothing, and the building of houses.

I have already presented in a separate table the noteworthy industrial schools in the different parts of the United States, showing not only the numbers of students but the branches of study pursued. I would here call attention to the importance of good teachers in this new experiment of teaching industries. If the schools are to furnish students well equipped to enter the fields of labour, it is necessary that the teachers understand how to combine science with the arts; how to make the pupil understand the reasons for the knacks and technicalities of the trades. At present we have few teachers who can teach the arts and trades as well as the great mass of teachers can teach arithmetic, reading, and geography.

Q. (By Mr. C. J. Harris.) Is not the old system of apprenticeship the best system of manual training they can get; get so much schooling and then go in as an apprentice?—A. I am not quite prepared to say that the apprentice system remains to this date the best system of learning. I think that in many of the arts the school gives a much better instruction, and that as soon as the teachers of the arts and industries have learned how to teach their specialities in progressive lessons, just as arithmetic is taught, they will far excel the best forms of apprenticeship. The just complaint against the apprentice system is that the employer naturally wishes to get as much as he can out of the apprentice and hold him as long as he can in his service. He therefore holds back from the pupil a knowledge of the higher secrets of the trade, and does not give him the finishing touch. He keeps the apprentice at work on the drudgery of the trade too long, and often the apprentice is not helped at all to acquire the highest skill. It is a different thing in a school. The individual is praised and rewarded for his efforts to master the most difficult processes of the trade, and it hastens the pupils as fast as their capacity will permit. From year to year new cities are building manual training schools and trade schools, and it will by and by become possible for any person who has earned a little money to leave his regular work and take a portion of a year or a whole year for better preparation in some trade school. This will assist very much the transfer of the best labourers from the production of raw material and the coarser manufactures into spheres where the highest skill is required and paid a much higher remuneration. In the article to which I referred a moment ago, showing this transfer of labourers, it is noted that in the twenty years from 1870 to 1890 the classes of labour which require more directive power and more skill increased very much faster than the population. For instance, designers and draftsmen and inventors increased from 104 in 1,000,000 to four times that number in each 1,000,000 of the population. Chemists and metallurgists increased to three times the number in each 1,000,000, journalists doubled, printers, compositors, and lithographers went up from about 3,000 in 1,000,000 to nearly 5,000 in 1,000,000; while, on the other hand, the mere blacksmith, the man of all work, decreased from 11,000 in 1,000,000 to 9,000 in 1,000,000, and the specialised workers in iron and steel increased from 14,000 to 21,000 in 1,000,000. Workers in stoves and furnaces, upholstery, paper hanging, plumbers, makers of pottery, painters, and glaziers, makers of clocks and watches, increased from 9,000 in 1,000,000 to 16,000 in 1,000,000. Besides this there was a large increase of people engaged in managing street railroads and steam railroads and in the transfer of passengers by other conveyances, so that while in 1870 there were 22,000 in each 1,000,000, in 1890 there were over 38,000 in each 1,000,000. There was certainly a vast improvement in the dwelling houses in the same period, so that each

person is able with the wages that he receives now to obtain far more and far better house room.

I have mentioned already the increase of high schools in the United States. Last May I made a comparative table showing the increase of higher education in colleges, universities, and technical schools, and discovered, to my surprise, that in twenty-five years, between 1872 and 1897, the number of students in the colleges alone, omitting professional and technical students, had increased from 590 in 1,000,000 to 1,210 in 1,000,000, and that the number of college students pursuing special investigations with a view to increase a scientific knowledge in special provinces had increased from less than 200 in 1,000,000 in 1872 up to 5,000 in 1,000,000 in 1897. This class of students, it is well known, is a class of students that furnishes the most useful inventions and devices not only for manufactures but for the problems of city life that relate to the public health and the management of waterworks, gasworks, the purifying of the slums, and such matters.

I. Number of college students to each 1,000,000 persons in the United States (excluding professional and technical students, but including post-graduate students):

1872	- - - - -	590
1873	- - - - -	740
1874	- - - - -	760
1875	- - - - -	740
1876	- - - - -	720
1877	- - - - -	710
1878	- - - - -	790
1879	- - - - -	780
1880	- - - - -	780
1881	- - - - -	760
1882-83	- - - - -	740
1883-84	- - - - -	750
1884-85	- - - - -	760
1885-86	- - - - -	700
1886-87	- - - - -	710
1887-88	- - - - -	710
1888-89	- - - - -	750
1889-90	- - - - -	880
1890-91	- - - - -	930
1891-92	- - - - -	1,020
1892-93	- - - - -	1,080
1893-94	- - - - -	1,140
1894-95	- - - - -	1,190
1895-96	- - - - -	1,220
1896-97	- - - - -	1,210

II. The following table shows the number of post-graduate students in the universities and colleges of the United States each year for twenty-five years (these are included in Appendix II.):

1871-72	- - - - -	198
1872-73	- - - - -	219
1873-74	- - - - -	283
1874-75	- - - - -	369

1875-76	- - - - -	399
1876-77	- - - - -	389
1877-78	- - - - -	414
1878-79	- - - - -	465
1879-80	- - - - -	411
1880-81	- - - - -	460
1882-83	- - - - -	522
1883-84	- - - - -	778
1884-85	- - - - -	869
1885-86	- - - - -	935
1886-87	- - - - -	1,237
1887-88	- - - - -	1,290
1888-89	- - - - -	1,343
1889-90	- - - - -	1,717
1890-91	- - - - -	2,131
1891-92	- - - - -	2,499
1892-93	- - - - -	2,851
1893-94	- - - - -	3,493
1894-95	- - - - -	3,999
1895-96	- - - - -	4,363
1896-97	- - - - -	4,919

III. Number of professional students to each 1,000,000 persons in the United States:

1872	- - - - -	280
1876	- - - - -	380
1881	- - - - -	440
1885-86	- - - - -	450
1890-91	- - - - -	570
1895-96	- - - - -	740

IV. Students in scientific and technical courses in the United States:

1889-90	- - - - -	14,869
1890-91	- - - - -	15,586
1891-92	- - - - -	17,012
1892-93	- - - - -	20,329
1893-94	- - - - -	23,254
1894-95	- - - - -	24,055
1895-96	- - - - -	23,598

It is significant that the people of the United States as a whole have increasing faith in the higher education in colleges, that in the short period

of twenty-five years the number sent by the people to these institutions should have more than doubled in each million of inhabitants.

*Amount of Production in the State of Massachusetts.*—Average for each inhabitant per day on the basis of 1880 and compared with school enrolment.—The total production of the labour of the people of the United States for 1880 was about 44 cents apiece per day for each man, woman, and child; but the production of Massachusetts with its average of seven years of schooling for each inhabitant was nearly double that of the average for each inhabitant of the whole nation. I have made on different bases three estimates, using the data given by Col. C. D. Wright in his census of the State for 1885. The lowest estimate gives 68 per cent more than the national average, the second 81 per cent, the third and best one exactly 100 per cent. The population of Massachusetts is 4 per cent, and its production is 8 per cent, of that of the whole nation. Who that looks at modern productions of industry and considers how much of it is due to machinery, and considers further the dependence of machinery for its management on alert and educated intelligence, can fail to see the relation of the schools of Massachusetts to its phenomenal production of the items of wealth. (See also foot-note, page 105 though one needs, of course, to avoid isolating unduly any one cause of industrial progress.)

The virtue of prudence or productive industry insures the existence of other virtues, such as temperance and honesty. For the fact that the people of a State have arrived at the stage of political conscience that they attack not only the crime, but also its source, in such vice as intemperance, implies an advance also in regard to many virtues. And cannot the well kept schools claim a large share in producing these favourable moral conditions?

Q. (By Mr. A. L. Harris.) You spoke a moment ago about the manual training schools. Do you know how many colleges in the United States have a farm on which the students of agriculture can learn the practical part of farming along with the scientific part?—A. I do not think that the agricultural colleges, with their model farms, are working exactly along the line that you indicate. They are doing excellent work in mathematics and science, they are studying agriculture, chemistry, and acquiring general ability for investigating, but I do not think that they are giving as much time as they ought to, or as much time as they will give to the so-called practical problems of agriculture in their own States. I think perhaps that they could do more service by devoting more of their time to a study of the methods used by the best farmers in their States. There is the matter of preparing goods for market and marketing the same. It seems to me that a study of the methods employed by the most successful farmers would create in the minds of the agricultural pupils an ideal standard as to the best methods in this respect. A study of the methods employed for improving crops and unimproving the character of live stock, studying meanwhile the methods in actual use in the State, would produce fruitful results. The inventory of the successful farmers and the best farms, the best methods and the greatest results, the study of the causes of these things, would be very profitable to the students of the agricultural colleges and would certainly lead to great progress in the States. There is a great difference between the study of chemistry by means of a text book and the same by means of a laboratory. There is a great difference between the study of the general theory of a subject and a study of its application in one's own neighbourhood.

Q. (By Mr. Phillips.) Speaking of higher education, have you any remarks to make in regard to female education in the last twenty-five years?—A. The education of women in institutions of higher learning has been revolutionised in the past twenty-five years. The education of women in colleges has increased greatly the number of active minds who

are investigating all sorts of problems belonging to sociology. The following table will give some idea of this increase :—

*Women College Students in Colleges and Seminaries for Women and in Co-educational Colleges.*

[From Reports of Commissioner of Education.]

1874	- - - - -	14,768	1886-87-	- - - - -	—
1875	- - - - -	12,807	1887-88-	- - - - -	18,548
1876	- - - - -	13,845	1888-89-	- - - - -	20,759
1877	- - - - -	15,333	1889-90-	- - - - -	20,943
1878	- - - - -	15,213	1890-91-	- - - - -	22,091
1879	- - - - -	14,274	1891-92-	- - - - -	23,381
1880	- - - - -	16,576	1892-93-	- - - - -	24,633
1881	- - - - -	16,783	1893-94-	- - - - -	28,230
1882-83-	- - - - -	17,493	1894-95-	- - - - -	29,748
1883-84-	- - - - -	19,326	1895-96-	- - - - -	32,234
1884-85-	- - - - -	17,439	1896-97-	- - - - -	32,472
1885-86-	- - - - -	—	1897-98-	- - - - -	34,040

The higher education of women has tended to displace men in certain employments. It is a matter of common observation that women are taking up their quota of clerkships. This displacement is nowhere more noticeable than in education, which now shows for 1897, out of a whole number of 403,333 teachers in the public schools of the country, only 32·6 per cent. of male teachers, 271,947 being women teachers. I have already considered above in many places the question of readjustment of vocation. What is the effect of putting one class of labourers out of employment? The labourers displaced seek other employments. If they are well educated they give themselves to the acquirement of some new skill in a higher employment than they had before. In fact, in a prosperous period of business, such as existed between 1880 and 1890, the higher grades of occupation increase and expand. Capital seeks investment and moves into the higher spheres of labour, and makes its draft on the population for the most skilful and versatile of the labourers to enter the new occupations.

PRESENT INDUSTRIAL PROBLEMS.

Q. (By Mr. Farquhar.) Do you think the more the working classes are educated and begin to know their rights and privileges as members of the community that more discontent comes among the classes and more irritation between capital and labour?—A. I certainly think that the working class in proportion as it becomes educated knows its rights and privileges as members of the community and that more discontent is created and more irritation grows up between capital and labour. I think that the hatred of capital which prevails among many individuals of the labouring population is due to the fact that capital has not undertaken efficiently the political education of the labouring class. If capital showed in a simple and clear manner how its employment in the community for the promotion of manufactures and commerce cheapens the cost of the necessities and of the luxuries to all consumers, and that it makes the employment of the wage-earner more constant, and if it showed that the invention of machinery thereby increases the amount of productions of all kinds that can be purchased by the consumers, and also that it has rendered possible a change of vocations from the mere drudgery of producing raw materials or manufacturing coarse goods up to skilled industries wherein the wage-earner doubles and trebles his wages, I think that a more healthful popular opinion with regard to capital would come to exist in the minds of the workers. Capital owes it to itself to make its usefulness to the whole people as plain as a lesson in elementary arithmetic. It ought to teach, for

one thing, the great service to the community of combinations made by that class of persons known as captains of industry. The creation of a railroad system, the cementing of it in all its parts into one whole, the adoption of very expensive rails, engines, and cars, the perfection of supervision over the whole so that it can reduce the cost of transportation of freight from  $3\frac{1}{2}$  cents a mile per ton to one-seventh of that, or one-half a cent a mile per ton, is a prodigious benefit, showing its results in the enormous increase of value of farms in the North-west, and, on the other hand, a corresponding decrease in the cost of the necessities of life in the city populations of the Atlantic coast. The invention of one man may be so greatly productive in this matter of a saving to the community that he may have added more than a billion of dollars to the wealth of the community while he has received one hundred millions for his own share. I presume that, as Mr. Farquhar suggests, capital in making its combinations often becomes careless of the condition of the workingman and flatters itself that it may ignore the public opinion of the workingmen of the United States. But capital certainly neglects its best interest when it comes to neglect the enlightenment of the labourer as to the actual function of large business combinations in the improvement of the condition of the people.

#### CRIME AND PAUPERISM.

Q. (By Mr. Smyth.) Do you believe that crime and pauperism are on the decrease in the United States instead of on the increase?—A. Pauperism is on the decrease in all the States which have a proper division of labour between agriculture, manufactures, and commerce. But the standard of poverty has been raised, and that class of persons who were obliged to shift for themselves fifty years ago now receive more or less aid from the public. So it is with regard to crime: the basis has changed somewhat; formerly the grosser kind of crimes were more frequent and little account was taken of many crimes which now are pursued with severity. The list of crimes has been increased by transferring many offences from the list of vices tolerated by society, such as drunkenness, for example, over to the list of punishable offences. To illustrate this I quote the following sentences from a paper of mine describing this apparent increase of crime in Massachusetts. (See Report on "Moral Education in American Schools," where this article is quoted.)

Q. (By Mr. Phillips.) I would be pleased to hear you on remedial legislation—industrial legislation—which has been raised by Major Farquhar and myself?—A. In reply to the question by Mr. Phillips as to remedial legislation, I think that general education is very important for the masses of the people, and perhaps sufficient for them; but there should be enough industrial schools to enable any person in the community to learn all that a school can teach regarding the main industry of his community—the working in wood and iron, in market gardening, and such matters as form the staples of industry. There are three classes of weaklings in society—the weakling in thrift, who produces pauperism; the weakling in morals, who is responsible for the production of crime, and, third, the weakling in intellect, who fills the asylums of the insane and feeble-minded. The weaklings of society need nurture more than they need justice. Justice imprisons them after they have broken the laws of the State. Nurture seeks them out, especially while of school age, and gives them special training with a view to make them useful instead of harmful to the community. The principle of civilisation which comes to us from Rome makes competition the basis of individual success in life. This is a higher idea than communism or socialism, but it is not adapted to the weaklings of society. The third class of weaklings need the patriarchal form of civilisation: they must not be given so much freedom as the normal class of citizens; they must be taken in hand by schools and by special organisations devoted



to charity. The Roman competitive system is good for the highest development of the individuality of men, but it presupposes a basis of pride of character, ambition, and fortitude. Where there are only weaklings in thrift and morals (especially on the side of self-indulgence) and in intellect (the slums of great cities, for instance), the competitive system crushes rather than aids.

In answer to the second question (of Mr. Farquhar), I should say that the manual training school, as it exists at present, is in an experimental stage. It is an important experiment, but it has not solved all of the problems, nor has it shown conclusively that the French, and Belgian system of special industrial schools is not preferable, on the whole. The most obvious reason in behalf of the manual training school as it exists is that this is an age of machinery, and it is well to have each individual know something about woodwork and ironwork, for the sake of general intelligence as regards the management of machines, or of the art of cookery. For this, knowledge of machines is useful every day; and a knowledge of cooking is a knowledge which makes palatable and nutritious the raw material of food which is apt to be wasted in a community where only a few of the women know how to make palatable and nutritious viands.

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## SUPPLEMENTARY APPENDIX.

### *The Business Value of a College Education.*

The following letter, dated December 17th, 1901, was received whilst this report was going through the press, from Dr. J. H. Canfield, Librarian of Columbia University, New York, formerly President of Ohio State University :—

“Replying to your note of the 6th of December I beg leave to say quite explicitly :—

“First:—A friend of mine in this city, a prominent business man, said to me a year ago, and has repeated the remark twice since, that he would very gladly employ not less than five young men, college or University bred, of the right stamp, at five thousand dollars a year, and that he believed he could place twenty such men in the business world of New York within thirty days.

“The characteristics demanded are thorough college training, or better perhaps the result of thorough college training: alertness, ingenuity, ability and willingness to take the initiative, faithfulness, and that general good sense which is partly inherited and partly developed by sound education.

“As an illustration of what he had in his mind, he said that it was almost impossible to find a young man who could be sent with a camera over a given line of railway, with instructions to note the salient points of the road and the country through which it ran, matters which would be of greatest interest to travellers, and on his return prepare an illustrated booklet, which would set all this forth in good English, and would be an artistic and taking advertisement for the road, possessing, at the same time, positive literary merit.

“Second:—Since my conversation with you, Hon. Lyman J. Gage, United States Secretary of the Treasury, in a public address at Detroit, made practically the same statement—that is, that thoroughly equipped college bred men were in such demand in the American business world



that he did not hesitate to say that twenty such men could be placed almost immediately in first-class banking houses at five thousand dollars a year—and he then proceeded to name almost the identical characteristics which I have given above.

“The fault which so many business men find with young men at present—possibly they have always found the same fault with them—is that their interests seem divided, they do not seem to be able or willing to make the interests of the firm their own, the results of their college training do not appear in enlarged vision, breadth of horizon, quickened perceptive faculties, accurate observation, and the ability to express themselves forcefully and attractively.

“It may be well to add to what I have already said, that both my friend and the Secretary of the Treasury stated that in speaking of young men they were not so unreasonable as to ask for these characteristics and this development immediately at the close of a college course, but that they were thinking and speaking of men of any age under thirty.”

This letter was written in response to a query relating to the statement quoted on page 153 of this report.

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# COMMERCIAL EDUCATION IN THE UNITED STATES.

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COMMERCIAL EDUCATION IN THE UNITED STATES.

I. INTRODUCTORY.

1. "No satisfactory exposition of the existing conditions of Commercial Education in the United States can be given at present." These are the opening words of the Report on Commercial Education, written for the Paris Exhibition of 1900,\* by Prof. Edmund J. James, who has, as we shall see, played an extremely important part in recent developments of this branch of education in the United States. The history of the subject, says Prof. James, is imperfectly known, and the statistics are incomplete. In the present article, an attempt is made to review such documents as are available, and to sketch out with their help, and to some extent on lines laid down in Prof. James's own report on the subject, the main features of American Commercial Education, and especially of its latest extensions.

The institutions which provide commercial education in the United States may be divided into five classes:—

- (1) Commercial or Business Colleges; (2) Public High Schools; (3) Private High Schools and Academies; (4) Public and Private Normal Schools; (5) Universities and Colleges.

The following Table, taken from the last three Reports of the American Commissioner of Education, shows the number of schools and of pupils in each class.

	Number of Schools reporting to the Bureau of Education.			Total Number of Business and Commercial Students in these Schools.		
	1897-8.	1898-9.	1899-1900.	1897-8.	1898-9.	1899-1900.
1. Commercial and Business Colleges†	337	320	373	70,950	70,186	91,549
2. Public High Schools	1,018	1,064	2,893	31,633	38,134	68,890
3. Private High Schools and Academies	653	670	869	9,740	10,609	15,649
4. Public and Private Normal Schools	107	105	75	5,721	6,126	6,657
5. Universities and Colleges (see p. 261).	172	191	183	5,869	6,463	7,953

\* Department of Education for the United States Commission to the Paris Exhibition of 1900. "Monographs on Education in the United States," edited by Prof. Nicholas Murray Butler. No. 13, "Commercial Education," by Edmund J. James, Professor of Public Administration in the University of Chicago.

† The figures furnished to the Bureau are admittedly not complete. Prof. James (*loc. cit.*, p. 8) quotes the estimate of "a leader of the Federation of Business Associations," which places the number of these schools at 2,000, and of their pupils at 160,000.



Before dealing in detail with these different classes, the character of the special training given in each must be briefly indicated.

It will be seen at once that the vast majority of commercial students are to be found in the Commercial and Business Colleges. These institutions, which date from about the year 1835, are peculiar to the United States. Their present aim is, during a course lasting, as a rule, from a few months to a year, to give by training, not only in book-keeping, arithmetic, shorthand, etc., but by what may be termed a business sham-fight, the preparation necessary to convert any boy, man, or woman possessing an elementary education, into an efficient clerk or book-keeper. They also include, in many cases, special day classes for amanuenses and telegraphists; and evening classes.

In the vast majority of schools belonging to Classes 2, 3, and 4—Public High Schools, Private High Schools and Academies, and Public and Private Normal Schools—the commercial teaching until recent years was “of a very meagre description.” In a rapidly increasing number of these schools, special commercial courses are now being drawn up, and distinct secondary “commercial high schools” are being organized.

The commercial movement in the Universities is also quite recent. The first of the Universities to institute a School of Commerce was the University of Pennsylvania, where the Wharton School of Finance and Economy was founded in 1881, with the help of a gift of 100,000 dollars from Mr. Joseph Wharton. Since 1898, largely under the stimulus of foreign example, the University of Chicago, the University of California, the University of Wisconsin, the University of Michigan, the University of Vermont, and Dartmouth College (in its Amos Tuck School), and finally Harvard, the premier University of America, have established special schools or schemes for higher commercial teaching; and the movement for the promotion of such teaching is certain to spread.

The total number of commercial students in schools and colleges reported to the Bureau of Education rose from 131,518 in 1898–9 to 190,698 in 1899–1900, the last year for which figures are available.

We shall now consider separately the various classes and ranks of commercial schools.

## II. COMMERCIAL OR BUSINESS COLLEGES.

*History and Statistics.* — 2. Until quite recent times these institutions, founded and carried on by private enterprise, have been entirely independent of any connection with public schemes of education.

The first, according to the records of the National Bureau of Education,\* was Dolbear's Commercial College, organized in

\* Quoted in an interesting paper on “The Evolution of Business Training,” by Mr. I. O. Crissy, Inspector of Business Education for the State of New York; “Addresses and Proceedings of the National Education Association,” 1899, pp. 1018–1025.

1835 in New York. Bartlett, of Cincinnati, was the first, in the forties, to assume for an undertaking of this kind the name "business college." \* In the middle of the fifties there were not more than a dozen commercial schools scattered in the large cities. "At first," says Mr. Crissy, "prevailing public sentiment did not favour such a school. Business men scouted the idea that boys could get any knowledge of business in a school. But chiefly through penmanship, I think, these schools obtained some patronage, and eventually it was rather grudgingly admitted that they could teach book-keeping. When it came to be generally believed that there was 'money in it' there soon grew up an unprincipled exploitation of the field of business education, which has left a lasting stigma on the name 'business college,' and done much to disgrace and discredit an honourable profession. In New York that title, which the 'faker' has made obnoxious, is being quietly dropped, and the less pretentious . . . names—institute, academy and school—are taking its place" (*loc. cit.*) †

Of these enterprises one of the most important was that of Messrs. Bryant & Stratton, who started a "chain" of business colleges, which eventually included fifty "links" in different cities. For a single fee of forty dollars, a pupil was entitled to attend classes as long as he pleased in any of these cities. ‡ But gradually the importance of the different centres grew; they became independent; they were replaced by competing institutions, and their system of interchange came to an end. The instruction offered in the original colleges "was very meagre; some so-called commercial arithmetic, a little practice in keeping accounts, and a certain amount of ornamental penmanship made

\* Quotation by E. J. James, *loc. cit.*, p. 6, from L. (J. S.) S. Packard, in the *Practical Age*, January, 1897, p. 5.

† At a conference held at the office of the Regents of the State of New York, in 1895, it was recommended "that the best interests of business education would be served by discontinuing the use of the name 'College' or 'University'" ("Diplomatic and Consular Reports," published by the Foreign Office, Miscellaneous Series, No. 504, 1899, p. 25). The term used in the Reports of the United States Bureau of Education, is "Commercial or Business Schools." In the present paper it has been found necessary to keep to the more distinctive title of "Business College" in order to avoid ambiguity.

In the State of New York itself, the creation, not only of Colleges of Business, but of "Colleges of Magnetism" "Colleges of Midwifery" and even "Barbers' Colleges," induced the Legislature to deal with the question. "By the Act of 1892, and supplementary Acts, the use of the name College or University was restricted, under severe penalties, to such institutions as were specially chartered under such name, or had the written permission of the Regents of the State of New York under their seal to use it. The law also prohibited the granting of *diplomas*, except by institutions having degree-giving powers." Other institutions may grant "certificates," but the word "diploma" is reserved for the recognised institutions. I. O. Crissy, "Business Education in the State of New York," published in *Business* (New York), for September, 1899.

‡ This system of payment was called the "scholarship system."

up the total." Arithmetic and book-keeping were taught by manuscripts prepared by actual accountants engaged in business. The students, who were themselves also engaged in business, spent, for the most part, a course of only three months at the evening classes of the business colleges. But "increased popularity led to higher fees, longer courses, to the preparation of printed texts; the teaching force was increased; students were no longer adults wearied with daily labour; the commercial school began to draw young men and boys looking forward to employment; day classes largely took the place of evening instruction; school equipment improved, and gradually these institutions grew into the apparently permanent place in public favour which they enjoy to-day." \*

Nevertheless, in their present condition, says Prof. James, "they are not educational institutions in any broad sense of the term at all. They are trade schools pure and simple, and that in a very narrow sense. They are schools for commercial mechanism—training 'the clerk, the routinist, the amanuensis, not the manager or director of business enterprises.' That hundreds of the students of the colleges have been successful business men of initiative and business enterprise, simply proves that they had native ability for that sort of thing, although former pupils acknowledge, in many cases, that they got their start in life through technical training acquired in the schools."

But these schools have not only developed, they are still developing under the influence of four more or less distinct factors:—

First, the managers are realising that even for the clerk better technical instruction and a broader general education "pay;" that a clerk should, as far as possible, be equipped by broader studies for subsequent promotion; that the capacity of the public to judge of the education given is growing, and that while ordinary "business principles" are necessary for the successful conduct of a business school, they are not sufficient; unselfishness in teaching is also an essential for successful teaching; a good deal of bread must be cast on the waters of education before it returns.

Secondly, the managers, under the stimulus of these convictions, are now beginning to employ teachers possessing pedagogic training as well as a knowledge of commerce. The demand is creating a supply of these teachers in commercial subjects.

Thirdly, the spontaneous educational advance of the managers has received an additional impetus from the rivalry of the commercial courses recently created or reorganized in the free public high schools, a rivalry threatening the existence of many business colleges.

\* E. J. James, *loc. cit.*, p. 7.

Fourthly, there is a possibility in view that the business colleges may receive official recognition and an acknowledged status in the schemes of public education throughout the United States.

3. The University of the State of New York has adopted a scheme for the recognition of business colleges, of which the history is interesting, and which is already serving as a model for other States. In 1896, Mr. Melvil Dewey, the well-known Director of the State Library and Home Education Department of the University, addressed the National Convention of Business Educators at their meeting at Buffalo, on the subject. The discussion at the meeting was followed by a conference between members of the Convention and of the University, at which the basis of a scheme was drafted. This was ratified in December, 1896, and has gradually come into working order. A tentative syllabus of examinations was published in 1897. In April, 1898, the work of inspection was begun, and, within a little more than a year, twenty-six out of the seventy-three "business colleges" of the State were "fully or provisionally registered" (see below) by the University. In 1898, Mr. I. O. Crissy was appointed State Inspector for Business Education. Mr. Crissy issued a first edition of the business syllabus of the University in 1899, and a second edition (for which see Appendix B, p. 300) in 1900.

The University offers four kinds of "business credential:" the "State business diploma," "State stenographers' diploma," "State business certificate," and "State stenographers' certificate." These credentials are awarded on the results of University examinations. Diplomas are only awarded to students who have had a high-school education or its equivalent; candidates who have not taken a commercial course at a registered high school are required to have completed a full one-year course in a registered business school. "Certificates" are given on the same examinations to students, without any requirements as to previous education. (For further details of these business credentials see Appendix B, p. 300).

For "full registration" the University requires business colleges to possess six competent teachers, giving their full time to the school, to offer a satisfactory one-year course for the business diploma, and to be provided with a school equipment worth not less than five thousand dollars. The latter proviso means that it has "a complete and elaborate outfit for business practice in its various lines: offices fully fitted up, an abundance of typewriters, copying presses, manifolded machines, filing cabinets, and all things needful for instruction in practical office work." "Provisional registration" implies that the school has not the teaching force required for full registration. (See Appendix B, p. 315). Students from all schools registered, whether fully or provisionally, are admitted to the University examinations.

The Business Syllabus of the University of the State of New York for 1900 reported that the Eastern Commercial Teachers' Association, composed of teachers of New England, New York,

New Jersey, and Pennsylvania, at a convention held at Worcester in December, 1899, declared almost unanimously in favour of state supervision of all business schools. In Michigan, Ohio, and Massachusetts a movement with the same object in view was being organized, and a Bill providing for state supervision had been introduced into the Kentucky legislature.

4. Turning to the general statistics of the business colleges, we find that the number of such colleges reporting to the Bureau of Education increased from 26, with 5,824 students in 1870, to a maximum of 518, with 115,748 students in 1894. The number then steadily decreased until 1898-9 under the increasing rivalry of commercial courses in secondary schools.\* In 1899-1900 there was a sudden and unexpected rise in the number of their students reported from 70,186 to 91,549 (see p. 233). It had previously been pointed out by Mr. Crissy that, on the one hand, the field of evening classes remained open to them, and, moreover, that high school "graduates" were likely to attend the better day colleges in increasing numbers. This present increase, however, seems to be due to a sudden increase in the demand for commercial education, which even the phenomenal increase in the number of secondary courses could not satisfy; and the rivalry between high school and business college may soon be resumed.

Obviously the pressure on the business colleges will be exerted in different ways, under the influence of the extraordinary variety of educational organizations to be found in different States and cities, and it is probable or, at any rate, conceivable, that the present business colleges may, in the near future, give rise to two or more classes of schools differing in type. Special excellence in technical teaching may preserve the best colleges; local necessities for providing for those who have received insufficient school training may preserve other schools not so distinguished. And the chances of survival and development of existing institutions will obviously be immensely increased by official recognition, such as that offered by the federal University of the State of New York.

To sum up. The services of the business colleges in the past are undisputed, and have been immense. With the introduction of systematic commercial instruction into the secondary schools their position has been, to some extent jeopardised. Many of them will survive, thanks either to special excellence, to local necessities, or to some unforeseen "change of function," as the biologists term it. The rest will go to the wall.†

\* Dr. Harris, the Commissioner of Education, in his Report for 1897-8 (vol. II., p. 2411), from which these figures are taken, suggests that commercial depression may also partly account for this diminution.

† Their future may depend to some extent on the importance attached to the "business practice," to which it is only possible to devote the fifteen or sixteen hours a week regarded as necessary for really efficient teaching, in a special institution of this kind at present. It is conceivable that the high schools may tack on another year to the end of their commercial courses, and include the business college course bodily in their curriculum.



5. The Commissioner of Education publishes in his Annual Report the following detailed statistics with regard to "Commercial Business Schools" for each State or Territory.—

- (1) Names of schools and executive officers.
- (2) Number of instructors, male and female, in each school.
- (3) Total number of students enrolled, male and female, day and evening.
- (4) Average daily attendances at (a) day school; (b) evening school; (c) commercial course; (d) amanuensis course; (e) English course, (f) telegraphy course.
- (5) Number of months necessary for graduation.
- (6) Number of graduates, male and female, from commercial and amanuensis courses.

The following are the more important figures for the year 1899-1900 (the latest available):—

The number of schools reporting was 373. They employed 2,112 instructors—1,413 men, and 699 women. The total number of students was 91,549—58,396 male, and 33,153 female students. The total number reported as day students was 70,978—44,456 male, and 26,522 female. The total number reported as evening students (not attending day school) was 16,094—11,137 male, and 4,957 female. (Some of the schools did not send in separate returns of day and evening attendance so that the figures are not complete.)

The number of students reported in each course are given in the following table:—\*

	Male.	Female.	Total.
Commercial Course	37,538	12,844	50,382
Amanuensis Course	14,451	20,054	34,505
English Courses	9,439	4,053	13,492
Course in Telegraphy	1,033	286	1,319
Totals	62,461	37,237	99,698

6. *Duration of Course and Hours of Attendance.*—The ordinary course lasts for a school year of ten months (September to June approximately).

The hours are in general from 9 to 3, or sometimes 2:30 (with an interval for lunch), five days in the week.

Evening classes, lasting from 7 to 9 or 9:30 p.m., are held in many colleges.

7. *Curriculum.*—The larger colleges include, as a rule, the following courses (using the word here to mean a group of lecture-courses, classes, etc.):—

\* In many of the schools several thousand students were pursuing more than one course of study, which accounts for the fact that the total in the above table exceeds the total enrolment.



- (1) A Business Course, which will be discussed in detail below, and which is sometimes divided into two or three sections.
- (2) An Amanuensis Course (also called a Shorthand Course), which regularly includes shorthand, type-writing and English composition, and in some colleges, the classification and filing of business papers, indexing and proof-reading.
- (3) A Telegraphy Course, intended for telegraph operators, and chiefly practical.
- (4) An English Course (intended to supplement previous education, where this is necessary), including grammar, spelling and defining, letter writing, arithmetic, penmanship, and in some schools other subjects, such as algebra, geometry, physical geography, U. S. history, and drawing.
- (5) A Penmanship Course, including plain and ornamental penmanship, card writing, etc.

Courses 2, 3, 4 and 5 find their analogues in our polytechnics and evening continuation schools: possibly the amanuensis course may be more complete in certain colleges than anything ordinarily found in an English technical school,\* but an enumeration of the subjects taught seems sufficient.

The regulations laid down for the award of "State Stenographers' Diplomas and Certificates" by the University of the State of New York, are given in Appendix B, p. 300.

The fundamental courses are the business courses. They include in practically all the colleges book-keeping, commercial arithmetic, commercial law, business-forms (invoices, receipts, drafts, etc.), correspondence and business-practice and penmanship.

In many colleges great stress is laid on the teaching of English composition (apart from business correspondence and practice in speaking English). In a few colleges commercial geography, civics and economics are also included in the curriculum.

A number of curricula chosen by the United States Commissioner as typical are quoted in Appendix A, p. 299.

A. Of the business courses the central one is the Business-practice Course, in which the actual processes of business are carried on between different pupils.†

\* "The Leeds Training School for Ladies Qualifying for Secretarial and Business Appointments, of the Yorkshire Ladies' Council of Education" offers an excellent illustration of work of this kind.

† Similar courses, formerly American in origin, are to be found in the Commercial Schools from which they have been introduced into certain English Schools, notably those of the West Riding of Yorkshire. On this point see "Commercial Education as Home and Abroad," by Messrs. Hager & Graham (1902), pp. 27, 28, 35, 36, an official description of the Norwegian course, and *passim*. French-speaking schools designate the course by the term *Jeunes Commerçants* and the term *Commerciales* is often used by English writers. Mr. E. F. Whistler, in his interesting and suggestive work on *Commercial Education*, generally follows American usage. "Merchant Office" and "Model Office Work" are expressions also used.

The teaching varies from college to college. In some colleges elaborate counting-houses with all the furniture of a large mercantile house, including much brass, glass, and mahogany, are provided; in others the arrangements are simple. In many institutions purely fictitious "paper-money" is dealt with; in others, again, the paper money is given a value equal to one per cent. or one per thousand of its face-value, so that the students actually gain or lose by their transactions. Some schools carry on business correspondence with schools in other towns.

We give, *in extenso*, the descriptions given by the authorities of three important colleges of their business practice (see also pp. 304 and 318). It will be noticed that the element of advertisement is conspicuous in the first two descriptions. To remove it for the purposes of quotation would be to deface the documents. The first is from the section on book-keeping of the prospectus of the Albany Business College, one of the largest in the United States, with 21 teachers and 786 students.\*

Our method of teaching this study is at once the *most modern* and the most reliable. It is made extremely interesting, because of the practical character of the instruction given. Our plan of introducing *Actual Business Practice* near the beginning of the course and increasing it gradually to the end, adds interest to the student's work while in school and greatly augments his efficiency in business after graduation. We divide the study into the following departments, namely: *Theory, Initiatory Business Practice, Intermediate Business Practice, Advanced Business Practice and Counting-room Practice.*

*Theory* occupies only a very small part of the student's time, as we teach Theory only enough to lay a substantial foundation for the more practical part of the study. This beginning work in bookkeeping is taken in the large Assembly Hall, and here the student is taught the principles of Debit and Credit, Profit and Loss, Resource and Liability. He learns the use of the Day-book, Journal, Ledger, Cash-book and Bill-book, and makes entries of simple transactions in each. He also learns to take Trial Balances and make Balance Sheets, and after opening and closing a number of different sets of books in which a variety of business transactions are illustrated, and after he is well grounded in the principles of Bookkeeping, including both Single and Double Entry, the student is passed to the

*Initiatory Business Practice.*—Here he has an opportunity to apply in the most practical manner the principles mastered in his previous work. He is started in business, a sufficient capital for the purpose, in College currency, being placed in his possession. He keeps several sets of books adapted to the business in which he is engaged, and all transactions are actually performed through the medium of the College offices. When this work is completed, which includes properly closing the books, and filing and briefing all papers and documents used, the student enters the department of

*Intermediate Business Practice.*—This is conducted in a separate school-room . . . fitted up with Bank and Business Houses, . . . We are able to classify our Business Practice work with great advantage to our students by reason of our having two separate rooms completely furnished with Business Departments, in which *Banking* and

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\* The figures are quoted from the "Report of the Commissioner of Education for 1898-9, vol. ii., p. 2192.

*Wholesale Business* may be represented. In this intermediate room, students enter upon a shipping and commission business, involving transactions with the offices in the same room. Much of the business of the country is done in large cities on commission, and we introduce this form in our course in order that our students may be able to take their share of this work intelligently and successfully, either for themselves or for others. They are required to actually keep the books used in a commission business, including improved forms for *Commission Sales Book*, *Sales Ledger* and *Six-column Cash-book*. They also keep a Check book, and make *letterpress copies* of account sales and outgoing letters.

After spending three weeks in this room profitably, the student is promoted to the

*Advanced Business Practice.*—Here he enters our famous Business Practice Room, the finest in the world. Large and beautifully lighted, with banks and business offices finely furnished in cherry woodwork, the rooms have every appearance of a high-class metropolitan counting-house, and the student is given every incentive to make his work worthy of his admirable surroundings. He is assigned a handsome cherry roll-top desk for his own exclusive use, and becomes, in all essential particulars, a real business man. He is provided with the necessary capital, in College currency, and with blanks, documents and stationery, and enters upon a series of business transactions of great variety, such as might come to any merchant in business. He keeps a record of these transactions in a *model* set of books, and is thus practically a merchant and bookkeeper combined. All the forms of commercial documents used in this business are *actually* prepared by the student; such as *notes, checks, drafts, deposit slips, leases, deeds and mortgages, co-partnership* and other contracts, *receipts, orders* and *advertisements*. Every document of whatever character required in the student's work is used precisely as it would be in business. At the end of each day the teacher in charge is furnished with the results of the day's business, embracing such items as cash on hand, balance in bank, balances of bills and accounts payable and receivable, and inventory, in order that the student's work may be properly verified and approved. This gives three weeks' practical drill in keeping a record of original transactions by the best method ever devised for illustrating business in a school-room.

*Counting-room Practice.* This is the work in the business offices and banks to which allusion has already been made, and which are the special pride of the College. Ranged about three sides of the room are the beautiful offices, bright with plate glass and polished brass and marble, and fitted with every modern appliance for advanced office work.

Here is a transportation office which is essentially like an ordinary freight office. Here goods are received and delivered, shipments forwarded, freight charges collected, way bills made and copied. The goods represented pass sometimes from one student-merchant to another in our own building, at other times to students in other schools in distant cities.

Next is the Commission House, in which a full set of Commission Books are kept, the same as in the dealings of any Commission merchant with his customers. The work in this office is more advanced than that transacted in the retail commission business of our Intermediate Department, and consists of receiving and sending consignments by U.S. mail only, to students in similar schools located in other cities.

Here also is a Wholesale Merchandise Office, through which the students of the Advanced Business Practice obtain their goods for retail business. Here their orders are received and filled, bills prepared and collections made, and here, more decidedly than in any other of the offices, the student becomes familiar with the routine bookkeeping work of a great business house. In this office the following books are kept, viz.: General Ledger, Accounts Receivable Ledger, Accounts Payable Ledger, Sales-book, Cash-book, Check-book, and Letter-book.

Completing the list we have sometimes three Banks, carried on exactly the same system as the banks of our city, receiving the deposits and issuing the checks of the student-merchants to the desks outside.

discounting and collecting their notes, and in every way becoming the medium for their financial dealings with their fellow-merchants. Business is really done, and correspondence conducted with banks in New York, Boston, Philadelphia and elsewhere, and letters are actually transmitted by mail, containing remittances, drafts and statements, which, to all intents and purposes, are as real and *bond fide* as similar documents transmitted from one corresponding National Bank to another. All the books used in a regular Bank are kept in these, and we have repeatedly had students go directly from our work here to positions as clerks, bookkeepers, etc., in the banks of Albany, Troy and other places, and have had them tell us they had no trouble in doing their work, because the books were almost *facsimiles* of those to which they had become accustomed while with us.

The last four weeks of the student's course is spent in one or more of the offices above described. He fills the position of Freight Clerk in the Transportation Office, Invoice Clerk or Bookkeeper in the Wholesale and Commission Houses, or Discount Clerk, Teller or Bookkeeper in the Bank, all the work being done under the direction and guidance of a teacher, who is himself qualified for such work by having filled similar positions in Actual Business. This finishing process is of great value to our students, as is attested by the fact that many of them go almost directly from our school to fill positions of considerable responsibility with business houses.

The second is from the prospectus of "Eastman [College], Poughkeepsie, N.Y.," and the "New York Business Institute," two schools under the same management, the former of which was founded in 1859 by the Hon. Harvey Gridley Eastman.\*

"Unless already competent, which may be demonstrated by examination, the student is . . . required to master certain subjects, a knowledge of which is essential to a complete training for business. With this purpose in view one period is daily occupied with the improvement of the handwriting; another with the study of arithmetic and drills in rapid calculations; another to the English language with exercises in correspondence, punctuation, etc.; still another to lectures and examinations. A more particular account of what is undertaken in these studies, etc., will be found in other pages of this catalogue. During the acquisition of this knowledge the student is occupied the greater part of each day with the work of the PRACTICAL DEPARTMENTS, conducted on the New York Produce Exchange principle. The same method of dealing has been adopted in all our great New York Exchanges.† These Departments constitute the most excellent and interesting feature of the school and illustrate actual business in educational work by using the methods of the great exchanges. By a novel, original and ingenious plan of operation, combining Theory with Practice (known as the 'Eastman System of Practical Education') the student's mind and energies are more fully developed and tested than by any other method. The training is an imitation of the transaction of business, actual currency, negotiable paper and business documents of all kinds being passed from hand to hand, thus giving practical work and valuable experience in addition to the instruction imparted.

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\* Statistics of the staff and students of this college are not available.

† "Exchanges of this character now take so important a part in the business of every large city that, but for the want of space, we would give some extended notice of their history and workings. Suffice it to say that there are now in the City of New York not less than sixteen (16), organized (mostly by incorporation) Exchanges, through the medium of which nearly all the vast business of this immense metropolis is transacted. Among the more important are the New York Stock Exchange, Produce Exchange, Cotton Exchange, Petroleum Exchange, Mining Stock Exchange and many others."

"In these Departments everything is pre-eminently practical and thorough. Young and middle-aged men, from many sections of the world, are found keeping in motion the wheels of trade by genuine purchase, bargain and sale. Representatives from many states and from foreign countries, mingle together in the interesting activities of business, bringing mind in contact with mind, giving impulse and action to dormant energies, and stimulating ambition and zeal in every head and heart. Shrewd, keen-eyed merchants are seen on every hand, converting the school-room into a most interesting arena of youthful industry.

"*Commencing Business.*—During the first two or three days everything is explained to the student, that is, how to buy, what to buy, how much to pay, what discounts should be allowed or received, etc., the method of ordering goods, the uses of various articles in his outfit, as paper of different rulings, the kinds of books in which his records must be made, etc. Thus, nothing is left to the possibly erroneous methods of the novice; but, at the same time, it is made clear that the principal part of the work will be left to his judgment and conclusions soon enough. Some students have had sufficient practical experience to need less of this personal attention, but to the young person who is absolutely without experience considerable assistance is necessary for the first few days. After this, any student who can read English intelligently is comparatively safe in following the Guide, with only an occasional explanation from the instructor.

"*An Official Desk* is assigned to each student from which he opens the store which he has previously secured by purchase or lease from the Real Estate Agent in charge of the office to which the property belongs. For this store he receives a *regular lease or deed*, made out and executed with precisely the same formalities as are necessary to the proper purchase or lease of a building by a business man. He knows what leases and deeds are, because these and all other legal documents and business papers have been thoroughly illustrated and explained to him before he enters business. Having secured his store, he next goes to the Wholesale Merchant's 'Emporium' and purchases a Stock of Goods with which to begin. Then he visits the Insurance Office and takes out policies on his store and goods. He next opens a bank account with the College Bank, to the officers of which he has been introduced by some friend. Now he is ready for Business and begins at once to look out for customers. Each day's work is based upon quotations in the New York markets. The Guide indicates the transactions he must perform, which are as varied and comprehensive as it is possible to make them, and include such as would naturally occur.

"*The First Transactions* given to the student are very simple, and involve personal accounts 'Cash' and 'Merchandise.' These are repeated a number of times, until the novice is familiar with handling this kind of business. Later 'Expense' accounts are introduced and those known as 'Bills Payable' and 'Bills Receivable.' Other accounts and customs are brought into use, as the student advances in later stages of the work, the same plan being always followed, that is, one thing at a time, and that thing so often repeated and reviewed, that there is no possibility of forgetting it or becoming confused.

"With the further view of simplifying the book-keeping we have limited the books kept in the student's opening work to the Journal, Cash Book, Sales Book and Ledger, with the Bank Book, Check Book, Receipt and Invoice Books as auxiliaries. We prefer to use the Journal for original entries, because of its simplicity, placing under each Journal entry the explanatory matter formerly noted in the *Day Book*. We use the *Day Book* for memoranda only because custom now confines it to this purpose, and further, because we find that a student acquires familiarity with the principles of debit and credit more promptly by making all entries in the journalized form at the start.



"*He keeps his own Books* in all his operations, for which purpose little assistance is needed from the instructors, but only an application of the principles already acquired. Commencing alone with the Retail business he performs a prescribed line of transactions, buying from the Jobbers and selling to smaller merchants and consumers, making each day the proper records. These transactions, as was said above, are absolutely controlled with a view to preventing mistakes, but after a few days the work becomes independent, both as to amounts, and to the persons with whom he may trade. In this way, great variety as to books and accounts follows, rendering it impossible for one student to copy the work of another or to get along without making his own records.

"The wholesale merchant allows a certain discount for cash or sight draft, a discount smaller in amount for time paper, and still less on open accounts. When students sell to one another, they also allow discounts, which may be varied according to the terms of each transaction. It is through these means that gains or losses may be made in their dealings with one another. If money is made it is due to careful management; if lost it is the student's own fault.

"*The Department* provides, in this manner, for *Actual Business Exchange*. The currency, merchandise and paper handled have a value of one-tenth of one per cent., current money, one dollar purchasing one thousand dollars of College currency. The bank bills and fractional currency are neatly engraved, and printed on fine bond paper. This gives a real value to every transaction, and an interest that develops the energies and commercial instincts of the student. Every principle of trade is fully exemplified. Checks, Drafts, Notes, Bills of Exchange, Certificates of Deposit, Receipts, etc., are all in daily use, and the several essential features peculiar to each receive close attention and criticism. Endorsements and acceptances are genuine, and the penalty of non-payment enforced. The student has dealings with his fellow merchants and with merchants in other cities, with Wholesale and Commission Merchants, with Insurance, Railway and Express Companies, with Real Estate Agents, Brokers and Banks. His dealings with merchants in other cities are through the instrumentality of written letters. He gives and receives orders, holds correspondence with different firms, computes all interest, averages accounts, and in fact makes all calculations and transacts all the varieties of business incidental to such a merchant's life. Indeed, no more active and changing scene can be presented than is shown by this miniature Exchange during the hours of business.

"Now all this is as helpful to the adolescent mind as the Froebel system is to the kindergartners. It teaches them just what Agesilaus, king of Sparta, demanded that the young Spartans be taught, viz: 'That which they will practise when they become men.' Such discipline so conducted and followed up will almost force even into a stupid brain ability to go through with any business transactions.

"By permitting the student to do business on his own account his interest never flags. He deals with no imaginary persons; makes no imaginary sales, discounts or statements; handles no imaginary papers, but the actual transaction must in every case be performed. There are positively no fictitious names nor dates used, nor transactions recorded.

"Again each student has his own work to do just the same as if he was employed in a store or office, and it is in many respects identical with what will be required of him when he enters a business house with a large number of employes. The same rules that are used in a large business house for the government of its employes during business hours prevail in Eastman Business College, the teachers taking the place of the proprietors.

"*The Lines of Business* entered upon do not undertake to illustrate every department of trade, but are sufficiently extensive for a thorough training. Books in all kinds of business are kept on the same general



principles, but the requirements of various houses demand that these principles shall be elaborated differently for each. In order to enable our students to fill these requirements, appropriate work is given (after the initiatory business) for each of the following lines.

"1. *Retail Grocery* business for a single proprietor, in which the books are kept by Single Entry.

"2. *General Merchandise* exemplifying the establishment and conduct of a village or country store. The method of changing Single to Double Entry is illustrated.

"3. *Wholesale Dry Goods*.—The transactions required here are taken from the largest and best establishments of this character.

"4. *Wood and Coal* showing the formation of a co-partnership, and fully illustrating the books and accounts of this business.

"5. *Wholesale Flour, Grain and Hay, and Provisions*, introducing all forms of commercial paper and contracts; Bills of Exchange, Letters of Credit, Due Bills, Bonds, Mortgages, Leases, Guarantees, Assignments, etc., being practically used.

"6. *Commission* with the best forms of books, account sales, etc., for such a business. Shipments received and forwarded on both joint and sole account.

"7. *Manufacturing*. Illustrating especially the best forms for such a business and book-keeping by means of the columnar Journal, Cash Book, etc.

"8. *Corporations and Joint Stock Companies*. How formed; General Powers of; Terms used by; Accounts kept for; Partnerships compared with corporations, etc.

"9. *Opening and Closing Books* with advanced journalizing and other difficult problems.

"During these changes in the character of the student's business, several co-partnerships are formed and dissolved. The necessary articles are drawn up for these contracts, and all essential preliminaries and incidents are attended to. When a firm is dissolved, the student is required to make the partnership and other settlements; so when an interest in the business is sold to a new partner, or when capital is withdrawn or more capital invested. So new books are introduced, as it becomes necessary from prevailing custom to vary the manner of keeping the records. With a joint stock company or corporation, for instance, the books necessary are, as is well known, essentially different from those for the establishment of an individual or firm.

"We insist that each student shall take a cash balance, and also a balance of his Ledger accounts daily; a regulation which prevents confusion and thus greatly facilitates progress. All open accounts are settled periodically. These settling days occur at the end of each week, and must be strictly observed. The Guide contains minute instructions as to all these points, a constant study of which is encouraged both in the school rooms and at home."

The third is an account by Mr. C. E. Howard, President of the San Francisco Business College, of the methods used in this college, reprinted from the "Addresses and Proceedings of the National Educational Association for 1899," pp. 1002-1007.

#### *How I conduct a business-community school.*

I shall not attempt this afternoon to tell you how an ideal business-community school should be conducted, but I shall confine myself, as indicated by the title of this paper, to telling you how I actually conduct one.

Our school, as far as bookkeeping is concerned, consists solely of the business community, or actual business department, without any preliminary work in a theory department; for I belong to a class of those who think that the sooner the student gets to doing what you expect him to do, the sooner will he learn to do it.

When the student enters the school the first morning, we give him his outfit of stationery, with a list of the articles, and instruct him to examine the bill and check up the items to see if all the articles are there, and to add the bill in order to see that it is correct. After this is done the student is given a form for an opening entry, which he is instructed to write in his journal, substituting name and address for those given in the form. As soon as he has finished this he is given a capital of \$5,000 of college money, and is shown how to make out a deposit slip for the use of the bank. He is taken to the bank and initiated into the process of making a cash deposit. He is required to take every step, and to sign every book, and to answer such questions as are propounded to the businessman at the regular commercial banks. Having returned to his desk, he is instructed to pay his first month's rent, which he does by drawing a check in favour of the real-estate agent. The principle underlying the use of the check is explained to him, and, having actually placed the money in the bank and received the credit for it, he needs but a few words of explanation in regard to his check, and the manner of accounting for the withdrawal of this amount of money. This is the great secret which underlies that plan of teaching—that the student actually performs each transaction in its proper order, and sees the relation of each part of the transaction and of each separate transaction to all the others.

He is next instructed to buy a bill of merchandise for cash. In order that we may have a check upon the student's work during the first two or three days, his first fifteen bills of merchandise are bought by the means of printed order sheets, which are supplied to him, and by means of which we know just what he ought to get. Upon receiving his bill of merchandise, he is shown how to check up the cards belonging to it, and to verify the extensions, footings, and discounts, and how to "O K" and file the invoice. With this in his mind he is shown the proper entries to make on his books, with an explanation of the principles of debit and credit, as applied to the two accounts, cash and merchandise, which are involved in this transaction. The merchandise bought on the first bill is sold for cash on two separate bills to different students, and, on issuing the bill and receiving the check or currency in payment therefor, he is shown how to receipt the bill, and his attention is called to the importance of doing this work properly in the case of all cash transactions.

When he has bought six bills and sold the merchandise so received, he discontinues further transactions until after posting and taking a trial balance. We find that even with the exceedingly brief explanation of the principles of debit and credit, involving the two accounts given the student, he acquires the ability to journalize correctly any transaction involving these two accounts. He has not worried his head about acquiring any part of the "science of accounts," but he has learned, what is of vastly more importance to him, how to perform and record the transactions.

In posting from the journal, we find that the students are able to do the work with very little liability to error, by posting the succeeding debits in order, then returning and taking all the credits in like manner. While this method is not new, and is not followed by all, we think it is departed from to the student's detriment every time. I doubt if there is a teacher in the house who has not had his soul harried time after time by misfit trial balances, caused by the student's having posted an item to the wrong side. This does not occur once a month with us.

After the posting has been completed, after completing his trial balance and recording in the balance-book, the cash is compared with the bank account, balanced and ruled, and the student returns to his transactions. In this section of the work the bills-payable account is introduced by having the student buy a portion of his merchandise for notes on demand. The subject is discussed with him after he has bought the first bill in this way; his attention is called to the principle of debit and credit applying to the new account. Its identity with the principle as applied to the cash and merchandise is pointed out, and the use of the bill-book explained.

A small number of transactions are made, the accounts are again posted, the cash account is balanced and ruled as before, and a new set of transactions is entered upon. Personal accounts receivable are introduced through the means of bills sold on credit. At the end of this set he will have exhausted his fifteen order sheets. After a trial balance is taken, a statement or balance sheet is made, and the books are closed. In the fourth set the only new subjects are personal accounts payable, and the use of drafts drawn on the accounts receivable.

All of our first sets are short, so that the student will not lose sight of the work as a whole during the entire set. Each succeeding set becomes a little longer, and each set contains one or two new principles, with a large amount of practice of those already known. My ideas of correct grading, as applied to school studies, is that the student should never realise he has come to anything hard. I presume that this opinion will be dissented from by those who believe that the greatest mental discipline is secured by giving the students hard nuts to crack. This may be true in regard to some studies, but I do not believe that in bookkeeping and its allied studies it is so. I believe that if a student's work is properly graded he will rise step by step from known facts to the unknown, in such a manner as to teach him to reason *a priori* in regard to any transaction with which he may be confronted. It is our desire that the student shall acquire a symmetrical and integral knowledge of the subject, and we fail to see that this end is secured by placing arduous difficulties in the way, for the purpose of mental discipline. We insure proper grading of the subject by preparing the transactions that form the basis of the course in such a way that the student is forced to take them in the order in which we have laid them down. If, in teaching a given subject, we can lay down the principles plainly in the correct order, and insure the student's following them in that order, he cannot, if possessed of common observation and reason, avoid the conclusion we wish him to reach. We attain this end in our course by arranging the basic transactions on a roll of paper, which is contained in a pasteboard case with an opening in one side, covered with glass. This roll is provided with a turn-screw at one side, which turns the roll forward, but cannot be turned backward. This appliance is the cabinet which has been the innocent cause of so much hilarity on the part of those who have appliances to sell which are a little different. This is "making bookkeepers by turning a crank," which has been so derided by some of the venerable advocates of some other system of teaching. It simply resolves itself into this: the student is, by means of this appliance, given a set of business transactions to be followed; the transactions are arranged in the order in which we wish them taken; and, as he must take them in the order in which they are given, he cannot, as I have said before, if possessed of ordinary intelligence, avoid the conclusion we wish him to reach.

At this point I should like to call your attention to what I consider one of the most important features of the business-community, or, as we have called it, for the want of a better name, the "actual-business" plan of teaching. It is this: the transactions laid down in the cabinet furnish only about one-third of the material that is written in the books of the student. The plan of actual face-to-face transaction from the very beginning causes a large number of transactions to arise which are entirely independent of the cabinet, and which differ on the books of all the different students. For instance A may give B a note, as instructed by the cabinet. B is instructed by the cabinet to sell the note to a third party, which he does; that party is instructed to secure the payment of the interest from the drawer, or to secure a partial payment of the principal, or perhaps to discount the note in the bank, and the interest may be demanded by the bank; any of which will call for an entry on A's books which is not demanded by the cabinet. A sells to B on account. B is instructed to make a partial payment on the account by means of a note, or to pay the account by a draft on a third party. Transactions may be cited, none of which appear on the cabinet of A, except the original instruction. As a consequence he must be ready at all times to take care of any kind of

transaction that may be brought to him, and thus receives a continual review of everything he has gone over. This is an advantage that can be secured in no plan of teaching except the business-community or actual-business plan. No student knows the course that his business is going to take, neither does the teacher. There are certain transactions involving the use of the various principles and accounts which are common to the course of all the students, but this common course forms only in all 30 per cent. of the entire material written during the course.

We use but two separate offices, the bank and wholesale house; commission, forwarding, and such work as is taken up in some schools in separate offices are carried on at the desk of the individual student whenever he has reached a point calling for these subjects. This perhaps does not make as imposing a show to the prospective student, when he enters the schoolroom, as a large number of finely appointed offices with plenty of plate glass and brass rails, but it suits our purpose of conducting a plain, matter-of-fact, straight business-training school, with no frills or fripperies.

We require all bills sold on account to be sold subject to draft, unless the instructions specially provide otherwise. All bills on account are to be settled every second Friday. This is called "collection day." Each student is required on this day to see that his books are posted, and to make out and send to each debtor a statement of account to date. In this way all open accounts are closed at the end of two weeks. In thus adopting two collection days each month we follow an old California custom of early days, when steamers were the only regular means of communication with this State; all accounts were made up so as to send remittances on the steamers, which sailed semi-monthly. These dates of sailing came to be known as "steamer days," or "collection days," and, although the reason for it has long since passed away, the custom still continues in San Francisco among a large class of merchants. The dates have now been settled as the thirteenth and twenty-eighth, unless these dates occur on Saturday or Sunday, when collections are made the following Monday. This plan of semi-monthly collections prevents errors in books from becoming buried under a mass of work. An error in a personal account is bound to appear at this time, unless each party has made an exactly opposite error, which is very rarely, if ever, done.

This brings up a point which is always a question in the minds of those who are not familiar with the actual-business plan of teaching. They invariably ask: "What check do you have on your students? How do you know they are doing their work correctly?" An error in the personal account is sure to be discovered on settling day, as shown before. The work is so carried out in the room that each student is always ready to prove his work correct, and in case of a dispute each will immediately produce his vouchers, and the one who is wrong cannot help acknowledging the error. This point—that of the natural discovery of errors, the proof of the account by the vouchers, and the means of checking vouchers and accounts together to detect the discrepancy—cannot be reached by any other plan of teaching.

Every account on the books representing a resource or a liability can be proved in a similar way. There is but one class of errors that can pass undetected, and that is where an error of computation in an invoice is unnoticed. This mistake is not, however, an error in the accounts, and could pass through any house in the business world in the same way. It is possible for an error to be made by posting to one loss-and-gain account instead of another, which might remain undetected, but this would have absolutely no effect on the financial results of the business.

It is a pleasure to see students of this kind of work promptly produce their vouchers in settlement of questions which frequently arise. We require all advanced students, at some time in the course, to take the books of five other students and give a complete audit of them, verifying every account for a period of three months. In joint-stock and corporation work the corporations are made up among the students who subscribe for the stock, and at closings of the books an auditing committee is appointed and required to audit the books of the corporation.



A rigid inspection of books is carried out, and a strict compliance with the laws and customs of business is insisted on. No allowance is made for the fact that it is only school work. Everything undertaken by the student must be done to the best of his ability.

We eliminate, as far as possible the schoolroom atmosphere, and substitute for it the customs of the office. It becomes with us a workroom more than a schoolroom. There is a point I should like to mention here, and it is a very important one in connection with business-community, or actual-business, teaching, and that is the question of personal order in the schoolroom. It is very gratifying to us that every visitor who is himself a business teacher or a public-school teacher, or who is familiar with schoolroom work, commends us for the order displayed in our schoolrooms. It is the more gratifying, and the more a cause of self-congratulation, because it is secured at the expense of a small amount of special effort. This is a point of the greatest importance with this kind of work. Order, if not, as has been said before, "heaven's first law," is at least the first law of business; and without order in the schoolroom the business college fails in its first requirement. We find that the greatest factor in the question is to give the students something to do, to make it practical—something that teaches them what they want to learn: present it to them as one man would present a thing to another, and carry the idea through all our work that the relation of teacher to student is simply the relation of one business-man to another; and you have reached the goal.

This is the attitude which we take with our students from the start, and the collisions between the teachers and the students are exceedingly rare. Not infrequently weeks pass without a single word from the teacher to the students, except in the regular routine of instruction. The students imbibe in the very first day's experience in the schoolroom, the idea that it is a place for work; and that they are on their honour to do their best; and the trust is seldom violated. When, in rare instances, we find a student that is not amenable to this kind of treatment, we regulate the difficulty by removing the offender.

And, finally, we give what is probably a caricature, but an extremely life-like caricature, of the business practice in a western business college, drawn by R. L. Stevenson and Lloyd Osbourne, in *The Wrecker*, pp. 16–19.

"The commercial college was a fine, roomy establishment, pleasantly situate among woods. The air was health, the food excellent, the premium high. Electric wires connected it" (to use the words of the prospectus) "with 'the various world centres.' The reading-room was well supplied with 'commercial organs.' The talk was that of Wall Street; and the pupils (from fifty to a hundred lads) were principally engaged in rooking, or trying to rook, one another for nominal sums in what was called 'college paper.' We had class hours, indeed, in the morning, when we studied German, French, Book-keeping, and the like goodly matters. But the bulk of our day and the gist of our education centred in the exchange, where we were taught to gamble in produce and securities. Since not one of the participants possessed a bushel of wheat or a dollar's worth of stock, legitimate business was of course impossible from the beginning. It was cold-drawn gambling, without colour or disguise. Just that which is the impediment and destruction of all genuine commercial enterprise, just that we were taught with every luxury of stage effect. Our simulacrum of a market was ruled by the real markets outside, so that we might experience the course and vicissitude of prices. We must keep books, and our ledgers were overhauled at the month's end by the principal or his assistants. To add a spice of verisimilitude, 'college paper' (like poker chips) had an actual marketable value. It was bought for each pupil by anxious parents and guardians at the rate

of one cent. for the dollar. The same pupil, when his education was complete, re-sold at the same figure, so much as was left him to the college; and even in the midst of his curriculum a successful operator would sometimes realise a proportion of his holding, and stand a supper on the sly in the neighbouring hamlet. In short, if there was ever a worse education, it must have been in that academy where Oliver met Charlie Bates.

"When I was first guided into the exchange to have my desk pointed out by one of the assistant teachers, I was overwhelmed by the clamour and confusion. Certain blackboards at the other end of the building were covered with figures continually replaced. As each new set appeared, the pupils swayed to and fro, and roared out aloud with a formidable, and to me quite meaningless, vociferation, leaping at the same time from the desks and benches, signalling with arms and heads, and scribbling briskly in notebooks. I thought I had never beheld a scene more disagreeable; and when I considered that the whole traffic was illusory, and all the money then upon the market would scarce have sufficed to buy a pair of skates, I was at first astonished, although not for long. Indeed, I had no sooner called to mind how grown-up men and women of considerable estate will lose their temper about half-penny points, than (making an immediate allowance for my fellow-students), I transferred the whole of my astonishment to the assistant teacher, who, poor gentleman, had quite forgot to show me to my desk, and stood in the midst of this hurly burly, absorbed and seemingly transported.

"'Look, look,' he shouted in my ear, 'a falling market! The bears have had it all their own way since yesterday.'

"'It can't matter,' I replied, making him hear with difficulty, for I was unused to speak in such a babel, 'since it is all fun.'

"'True,' said he, 'and you must always bear in mind that the real profit is in the book-keeping. I trust, Dodd, to be able to congratulate you upon your books. You are to start in with ten thousand dollars of college paper, a very liberal figure, which should see you through the whole curriculum, if you keep to a safe conservative business . . . Why, what's that?' he broke off, once more attracted by the changing figures on the board. 'Seven, four, three! Dodd, you are in luck; this is the most spirited rally we have had this term. And to think that the same scene is now transpiring in New York, Chicago, St. Louis, and rival business centres! For two cents. I would try a flutter with the boys myself,' he cried, rubbing his hands, 'only it's against the regulations.'

"'What would you do, sir?' I asked.

"'Do,' he cried with glittering eyes, 'buy for all I was worth.'

"'Would that be a safe, conservative business?' I inquired as innocent as a lamb.

"He looked daggers at me. 'See that sandy-haired man in glasses,' he asked as if to change the subject, 'that's Billson, our most prominent undergraduate. We build confidently on Billson's future. You could not do better, Dodd, than follow Billson.' . . .

"It's the only good thing I have to say for Muskegon Commercial College, that we were all, even the small fry, deeply mortified to be posted as defaulters; and the collapse of a merchant prince, like Billson, who had ridden pretty high in his days of prosperity, was, of course, particularly hard to bear. But the spirit of make-believe conquered even the bitterness of recent shame; and my clerk took his orders, and fell to his new duties with decorum and civility.

"Such were my first impressions in this absurd place of education. . . ."

The Report of the Committee of the Department of Business Education of the National Education Association on "A Course



of Study for Commercial Colleges," printed in the "Report of the Commissioner of Education for 1898-9," vol. ii., pp. 2163-2174, and reprinted in Appendix C (p. 315), shows what is considered an attainable ideal for business colleges at the present time; it does not appear to differ widely from the practice of the best colleges. It will be seen that the time allotted to "business practice" is "three hours of sixty minutes daily, for six months," or "from two-thirds to three-fourths" of the whole time given to book-keeping in the commercial course.

9. *Staff.* The head of the staff is termed "president" or "principal." He is in many cases the proprietor of the institution, which takes his name (*e.g.*, Coleman's Business College).

The average ratio of the number of the staff to that of the students, calculated from the returns for 1898-9 of the Commissioner of Education, was 1 to 34. But this ratio varies greatly in different colleges, and in some cases falls as low as 1 to 100. In the 320 schools mentioned in the above return, there were 1,196 male, and 585 female teachers.

10. *Individual Teaching.*—It is universally recognized that in book-keeping, where absolute accuracy must be obtained, individual teaching is essential, and all the colleges profess to give this.\*

11. *Fees.*—The fees for a complete business course in the day school, vary in the better colleges from 50 to 150 or even 200 dollars (*i.e.*, £10 to £30 or £40).†

12. *Business Education for Coloured Students.* The returns of the Bureau of Education for 1898-9 (vol. ii., p. 2203), show the total number of coloured students reported as receiving business education was only 139 (81 men and 58 women).

### III. PUBLIC HIGH SCHOOLS.

13. The number of scholars attending commercial courses in public high schools during the last three sessions for which statistics are available, was as follows:—

1897-8.	1898-9.	1899-1900.
33,075	38,134	68,890

The movement for introducing commercial subjects as a serious element into secondary education is a new one, dating

\* *Cf.* on this point, Appendices B & C, pp. 302, 303 and 317, and p. 279, note.

† Mr. Bernard de Hear gives as an average £20 a year. "Proceedings of the International Congress on Technical Education, London, 1897," p. 189.

back very few years.\* Teaching of book-keeping of an elementary kind, and of a little typewriting and shorthand were used previously to ear-mark a course as "commercial," "but the instruction given until recently was of a very meagre description."† But at present the high schools (the public secondary schools carrying on education from the age of 14 to 18) in a number of cities are offering distinct and separate courses for the education of the business man, comparable to those of the ordinary secondary school for the professional man, and distinct "commercial high schools," providing such courses only, are also being founded. To generalize with regard to a movement in its infancy is impossible; one can only point to beginnings and probable developments. But if the published papers on the subject are to be trusted, those pressing most for the establishment of such courses and schools are alive to the difficulties before them, and are aware that to make an efficient business man, a training in purely technical matters alone would be of little avail. Roughly speaking, we may say that three-quarters of the curriculum will be in all cases the curriculum of the ordinary "English course" of the high schools (insisting greatly on a knowledge of English and American literature, and on facility in writing and speaking the mother tongue), while one-quarter will be devoted to economics, book-keeping, and other business subjects

In Appendix D (p. 326) will be found a valuable paper by Mr. William E. Doggett, Assistant-Principal of the Commercial High School, Brooklyn, on the "Commercial High School Course" ("Addresses and Proceedings of the National Educational Association," 1900, pp. 555-562). He groups the studies as follows:—

"English; Mathematics; Science; Languages; History and Civics; Commercial Subjects taught separately as such, including Writing; Book-keeping; Arithmetic; Commercial Laws; Stenography and Typewriting."

and proceeds:—

"The study to which I assign the first place in the Commercial High School Course is English, by which I mean "the art of expression in conversation and writing, and on one's feet in public."

But while in providing a liberal education the commercial high school aims at doing many things that the business college did not try to do, Mr. Doggett thinks that "in order properly to fill its place in the community and justify its existence as a school supported by public taxation, the commercial high

\* Cf. a paper on the Advent of the Commercial High School, read at the National Education Association in 1899 ("Addresses and Proceedings," p. 1025), in which the author refers to "the spontaneous sentiment in favour of the Commercial High School, which has found expression . . . within the past two years."

† The "sound commercial education" of many English prospectuses, referred to by Mr. Sadler, *Special Reports on Educational Subjects*, vol. iii, p. 555, 1898.

school must teach those things which the best business colleges taught in a manner equally thorough and practical." Mr. H. M. Rowe of Baltimore, in a paper contributed to the same meeting (*loc. cit.* p. 562) on "The Advantages and Difficulties of introducing the Commercial Branches in Grammar and High Schools," insists on the same point, and especially on the necessity for the combination of individual with class teaching in book-keeping given in the business colleges, and for the use of modern methods and appliances. "Where trading between students is conducted," writes Mr. Rowe, "complete office equipments are required." The statement is conditional, it is not evident if either of the writers quoted is in favour of the introduction of the trading system in the form employed in business colleges (see p. 240, above) although they are agreed that the efficiency in technical attainment demanded must be at least equal to that demanded in the business college.\* Mr. Doggett sharply delimits secondary from higher commercial education. "I do not believe," he says, "that it is the function of the public secondary school to teach the philosophy of business management, nor do I believe that it is in its power to do so. The course of study of a public commercial high school must be exceedingly strong in those subjects which the 99 per cent. of those who attend will require (the essentials) and, if possible, strong in those branches which will be wanted by the 1 per cent. who are expected to become bank presidents, railroad managers, consuls, promoters of vast enterprises and the like."

All authorities are agreed that a four years' course is desirable, but a large number of pupils cannot afford to stay so long at the high school, and the attempt to provide a course satisfactory for those who leave early and for those who go through the school necessarily involves difficulties which must be taken account of in judging the schemes detailed below.

14. The foregoing statements of ideals, which seem to be typical statements, will enable the reader to grasp more readily the significance of the plans actually put into practice.

The following is the study plan of the Department of Commerce of the Central High School of Philadelphia†. The numeral following each course indicates the number of "recitation periods" (of 50 minutes each) devoted to it per week.

\* In the view of Prof. James (*loc. cit.* p. 28) this desideratum has not yet been reached in the commercial courses of high schools.

† According to a Memorandum contributed by the U.S. Commissioner of Education to a Report on Commercial Education in the United States (No. 304, Miscellaneous Series, published by the Foreign Office, 1899) the Hon. Edward Brooks, Superintendent of Public Schools in Philadelphia, had been advocating the establishment of a Commercial High School or Commercial Department in the Central High School since 1892. The City Council chose the latter on the score of economy.

SUBJECT OF STUDY	FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
I. English language and literature	Composition writing—Material in classical literature, in translation, and in American literature 4	History of English literature, with composition writing 3	Readings from English literature, with essay writing 2	Reviews—Readings and theme writing 3
II. Languages other than English	Elements of Latin, with essay readings 4	German grammar—Reading and conversation 5	German—Reading, composition, conversation and correspondence Spanish (or French) 3	German—Advanced reading, conversation, and correspondence Spanish (or French) 3
III. Mathematics	Elementary algebra 5	Advanced commercial arithmetic (including mensuration and the metric system) 2 Geometry and the elements of trigonometry 3		
IV. History	Greek and Roman history, European history to 500 A.D. 3	English and modern European history 3	American history 2	Modern, industrial and commercial history (United States, England, and Germany) 3
V. Science	Raw materials of commerce—Animal, vegetable, and mineral products 4	Commercial geography 2	Physics and chemistry 4	Industrial chemistry 2
VI. Economics and politics	Philadelphia—History, government, and business interests [lectures and quizzes] 2	Trade centres of the world (lectures) 1	Political economy 2	Transportation, banking, and finance 4 Statistics 1 Study of government (City of cities) 3
VII. Business technique	Business forms with penmanship practice 2	Book-keeping 3 Stenography 2 Type-writing (optional), extra hours	Mechanical drawing 2 Observation of and report on business methods, industrial operations, etc 3 Stenography 3 Type-writing (optional) extra hours	Ethics of business and commercial law 2

NOTE.—The Arabic numerals indicate the number of recitation periods per week for one year; in certain subjects twice the number indicated will be given for half a year. The course is planned for recitation periods fifty minutes in length.  
 From 'Commercial Education' by Dr. C. A. Herrick, Director of the Course in Commerce of the Philadelphia Central High School; supplement to the Fifth Year Book of the National Herbart Society, p. 230. Chicago 1900.

It is interesting to compare this with the 'three years' course of the Vienna Commercial Academy, intended for pupils of from 14 or 15 to 17 or 18, who have finished the course in the Lower Gymnasium, Real Gymnasium, or Lower Realschule, quoted by Prof. James in his Report on Commercial Education in Europe. (Reprinted in the Report of the Commissioner of Education for 1896-6, p. 738.)

COURSE OF STUDY.

*Required studies.*

											Hours per week.
<b>First year's course :</b>											
German	-	-	-	-	-	-	-	-	-	-	3
French	-	-	-	-	-	-	-	-	-	-	3
English or Italian	-	-	-	-	-	-	-	-	-	-	3
Commercial geography	-	-	-	-	-	-	-	-	-	-	2
History	-	-	-	-	-	-	-	-	-	-	2
Mathematics	-	-	-	-	-	-	-	-	-	-	4
Commercial arithmetic	-	-	-	-	-	-	-	-	-	-	3
Commercial knowledge and work in the model office	-	-	-	-	-	-	-	-	-	-	3
Physics	-	-	-	-	-	-	-	-	-	-	3
Natural history	-	-	-	-	-	-	-	-	-	-	2
Penmanship	-	-	-	-	-	-	-	-	-	-	2
Total											30
<b>Second year's course :</b>											
German	-	-	-	-	-	-	-	-	-	-	2
French	-	-	-	-	-	-	-	-	-	-	3
English or Italian	-	-	-	-	-	-	-	-	-	-	3
Commercial geography	-	-	-	-	-	-	-	-	-	-	2
History	-	-	-	-	-	-	-	-	-	-	2
Mathematics	-	-	-	-	-	-	-	-	-	-	2
Commercial arithmetic	-	-	-	-	-	-	-	-	-	-	3
Bookkeeping	-	-	-	-	-	-	-	-	-	-	4
Letterwriting	-	-	-	-	-	-	-	-	-	-	2
Commercial law and laws relating to bills of exchange	-	-	-	-	-	-	-	-	-	-	2
Chemistry and chemical terms	-	-	-	-	-	-	-	-	-	-	3
Study of products	-	-	-	-	-	-	-	-	-	-	2
Total											30
<b>Third year's course :</b>											
German	-	-	-	-	-	-	-	-	-	-	2
French	-	-	-	-	-	-	-	-	-	-	3
English or Italian	-	-	-	-	-	-	-	-	-	-	3
Commercial geography and statistics	-	-	-	-	-	-	-	-	-	-	2
General and commercial history	-	-	-	-	-	-	-	-	-	-	2
Commercial arithmetic	-	-	-	-	-	-	-	-	-	-	3
Political arithmetic	-	-	-	-	-	-	-	-	-	-	2
International trade and its usages	-	-	-	-	-	-	-	-	-	-	2
Model office	-	-	-	-	-	-	-	-	-	-	5
Commercial law and laws relating to trade	-	-	-	-	-	-	-	-	-	-	2
Political economy	-	-	-	-	-	-	-	-	-	-	3
Study of products	-	-	-	-	-	-	-	-	-	-	2
Total											31

*Elective studies.*

1. Practical work in the chemical laboratory :  
Four hours per week for the second and third years.  
Tuition, 10 florins per semester.
2. Practical work in the laboratory for study of products :  
For the third-year students.  
Tuition, 5 florins per semester.
3. Study of customs, laws, and practical work in details of customs administrations :  
For study of third year, two hours per week.  
Gratuitous.
4. Stenography :  
In two one-year courses, each two hours per week.  
Gratuitous for all students of the academy.

It will be seen that the Philadelphia scheme, which by its preservation of Latin (after the model of the German *Real-Gymnasien*) represents the views of the right wing of the advocates of secondary commercial education (or probably a compromise between opponents and advocates) is in sharp contrast with the Vienna scheme. It is impossible to offer a satisfactory judgment of the teaching merely on the basis of programmes. But the Vienna programme probably represents a minimum of the studies called "liberal," the Philadelphia one a maximum, and we may expect other American schemes to lie between these two extremes. A feature which they possess in common is the teaching of the mother tongue, the absence or deficiency of which in English schools of all kinds is the most remarkable defect of our education.

In 1896, a type of two years' commercial course was offered by the Brooklyn Boys' High School, of which the curriculum is printed in Appendix F (p. 339), together with the curricula of the classical, liberal, and scientific courses, for the sake of comparison. From this commercial course a Commercial High School with a three years' course was developed and established in Brooklyn in 1900.† We give its curriculum below.

FIRST YEAR.

First Term.	Per-iods	Second Term.	Per-iods
English . . . . .	5	English . . . . .	5
German or Spanish . . . .	4	German or Spanish . . . .	4
Hist.—Eng. and Mod. Europe .	3	Hist.—Eng. and Mod. Europe	3
Arithmetic . . . . .	4	Arithmetic . . . . .	2
Commercial Geography . . .	3	Physiology and Hygiene . .	3
Penmanship and Accounts* .	6	Penmanship and Accounts* .	6
	25		23

SECOND YEAR.

First Term.	Per-iods	Second Term.	Per-iods
English . . . . .	4	English . . . . .	4
German or Spanish . . . .	4	German or Spanish . . . .	4
History. American, and Civics .	3	History, American, and Civics	3
Physics, or a second language .	4	Physics, or a second language	4
Stenography* . . . . .	3	Stenography* . . . . .	3
Algebra* . . . . .	3	Algebra* . . . . .	3
Accounts* . . . . .	4	Accounts* . . . . .	4
	25		25

† The school possesses a staff of 28 teachers receiving salaries ranging from 1,300 to 3,000 dollars per annum. The Principal receives 5,000 dollars. The school has about 600 pupils. Mr. Doggett, who has kindly furnished the writer with most of the information given about the school, writes: "There is a great demand (far exceeding the supply) for graduates from our school. They are able to start at from 6 dollars to 15 dollars a week, and, as a rule, advancement is rapid."



## THIRD YEAR.

First Term.	Per- iods	Second Term.	Per- iods
English . . . . .	3	English . . . . .	3
German or Spanish . . . . .	3	German or Spanish . . . . .	3
History of Commerce . . . . .	2	History of Commerce . . . . .	2
Chemistry, or a second language	3	Chemistry, or a second language	3
Commercial Law * . . . . .	3	Commercial Law * . . . . .	3
Geometry . . . . .	3	Geometry . . . . .	3
Stenography * . . . . .	2	Stenography * . . . . .	2
Typewriting * . . . . .	3	Typewriting * . . . . .	3
Accounts * . . . . .	3	Accounts * . . . . .	3
	25		25

The figures opposite each subject indicate the number of periods per week assigned to its study. A period is forty-five minutes.

In addition to the above, there are two periods per week for drawing, and one period for music and one for physical culture.

In the above scheme subjects which may be considered as purely technical have been starred. In these are included neither Commercial Geography nor History of Commerce, which, if properly taught, may certainly be regarded as "liberal" studies. It will be seen that the total number of "periods" devoted to technical studies is 48, as against 100 devoted to liberal studies.

Mr. I. O. Crissy has kindly supplied a typical four years' course, which, with slight modifications, is now in use in many high schools in the State of New York.

In the table each "count" represents forty-five minutes a day, five days in the week, for ten weeks.

## FIRST YEAR.

First Term.	Second Term.	Counts.
First Year English (2)	First Year English (2) . . . . .	4
„ „ German (2)	„ „ German (2) . . . . .	4
Physiology and Hygiene (2)	Elementary Book-keeping (2) . . . . .	4

## SECOND YEAR.

First Term.	Second Term.	Counts.
Second Year German (2)	Second Year German (2) . . . . .	4
Algebra or Geometry (2)	Algebra or Geometry (2) . . . . .	4
Roman History or Drawing (2)	English History (2) . . . . .	4

## THIRD YEAR.

First Term.	Second Term.	Counts.
Physics or Chemistry with laboratory work (2)	Physics or Chemistry with laboratory work (2) . . .	4
Advanced U.S. History (2)	Commercial Geography (2) .	4
Civics (2)	History of Commerce (1) . .	3
Stenography, 50 words (2)	Commercial Law (2) . . .	4

## FOURTH YEAR.

First Term.	Second Term.	Counts.
Advanced Book-keeping (2)	Business Practice and Methods (2)	4
Business Arithmetic (2)	Economics (2) . . . .	4
Typewriting (2)	Stenography (100 words per minute) (2) . . . .	4
Business Writing (1)	Business English (2) . . .	3

Vocal music, physical culture and rhetorical (*i.e.* composition) exercises throughout the course. Lectures and "quizzes" throughout the last two years.

It will be seen that the fourth year is mainly devoted to technical commercial work, while in the first two years only two 'counts' altogether are given to it.

In the Boston High Schools the commercial course, adopted by the School Committee in 1897, covers two years. About half the time is devoted to general secondary studies in English, history, etc., and the other half to commercial subjects: penmanship and commercial forms, commercial arithmetic, book-keeping, mercantile law, stenography and typewriting, commercial geography.\*

In the Hillhouse High School, New Haven, Connecticut, there is a commercial course of three years (the other courses being of four years). About five hours a week, approximately one-third of the time, is given to strictly commercial subjects, the rest being of a general nature.\*

In the city of New York there is a Business High School, established in 1890, which for long was the only business high school in the United States supported wholly from public funds. The requirements for admission are the same as for other high schools in the city and presuppose the completion of the eight year course of the elementary schools (differing in this from the business colleges, which are open to all). The course of study is as follows:—

First Year: English grammar and literature, business arithmetic, book-keeping, penmanship, shorthand, typewriting or mechanical drawing.

Second Year: English grammar and literature, book-keeping and business practice, commercial law and commercial geography, shorthand, typewriting, advanced mechanical drawing.

\* *Cf.* E. J. James, *loc. cit.* p. 27.

The school had 310 students (160 males and 150 females) in 1890-1, 601 students and 20 teachers in 1897-8. The average age of students entering is 16-17 years.

The curriculum of this school was obviously drawn up before the new movement had made itself felt; and the school provides a superior kind of "business-college" education, rather than secondary education.

15. The average annual cost per pupil in 37 public high schools, having commercial courses, with an aggregate of 24,669 pupils, was 38.90 dollars, the extreme figures in schools being 26.81 dollars at Trenton (N.J.) High School, with 498 pupils, and 78.02 dollars at Jamaica (N.Y.) High School, with 116 pupils.\* This figure was calculated for all the pupils—it is assumed that the cost for the Commercial Course is the same as for the other courses. (For further remarks on secondary commercial education, see the next section, and also pp. 279-285.)

#### IV. -PRIVATE HIGH SCHOOLS AND ACADEMIES, AND PUBLIC AND PRIVATE NORMAL SCHOOLS.

16. The commercial courses in these schools offer the same kind of variety in aim and efficiency as those in the public schools, some being of the "liberal," others of the "technical" type. Few details are available with regard to the normal schools, which are classed by Prof. James with the private secondary schools. Many of these institutions indeed, devote their energies mainly to completing an insufficient school education rather than to the special training of the teacher.†

The work of the Drexel Institute of Arts, Science, and Industry at Philadelphia is quoted by Prof. James as a very good type of the best work which private endowed institutions can do in the field of commercial education. From the account of the institution, given by Prof. James, which is reprinted in Appendix H (p. 342), it will be seen that this school is conducted on entirely different lines from the commercial section of the Philadelphia High School. Its two years' course, intended for pupils of sixteen to eighteen, and which may be compared, therefore, with the final two years' course of the Philadelphia School is almost entirely technical, and similar in aim to the course of the Vienna School (p. 256).

It is difficult to regard the teaching of such a school as a branch of secondary education in any sense,‡ the secondary

\* "Report of the Commissioner of Education, for 1897-98," vol. ii, p. 2450.

† Monographs on Education, etc., edited by Prof. N. M. Butler. The Training of Teachers, by Prof. B. A. Hinsdale, vol. i, p. 380 (separate pagination, p. 22).

‡ "Diplomatic and Consular Reports of the Foreign Office." Miscellaneous Series, No. 504, p. 47.

education of the students being supposed to be complete when they enter. It may more justly be compared to the Business High School of New York, and the better business colleges, for which no doubt it will serve as a model.

## V.—UNIVERSITIES AND COLLEGES.

17. Commercial Courses given in universities and colleges, of which the United States offer such varied types, are of two kinds.

The first is comparable to the purely technical courses, given in business colleges or in the Drexel Institute (see p. 260), no doubt varying greatly in scope and value in different institutions. Of the commercial courses given in the 191 "Universities and Colleges," with 6,463 commercial students, mentioned in the report of the Commissioner of Education for 1898-9, (vol. ii, p. 2174) the vast majority belong to this first kind, and nothing further can be added with regard to them here.\* But in a few of the university institutions of the higher class, higher commercial schools have been founded, comparable with the schools of Antwerp, Paris, and Leipzig, and our London School of Economics, and it is with the treatment of commercial subjects from "the University stand-point" in the English sense that it is intended to deal in the present section.

Speaking in December, 1900, on the Relation of the Colleges and Universities to Higher Commercial Education,† before the American Economic Association at Ann Arbor, Prof. James gave an account of the movement which must be quoted.

"The movement in this country for college and university training for the future business man seems to have entered, within the last year or two, upon a new era in its history. Twenty years ago, when I first began to insist that our business classes stood in need of higher special or professional education, and that this education should be given in our colleges and universities, my voice was like that of one crying in the wilderness, unheeded either by the business world, on the one hand, or by the college world on the other.

"Even up to within ten years only one institution of high rank had been found willing to move in this direction and to accord a half-hearted and timid support to the idea. To-day, at least a dozen of our leading institutions, and in this list one half-dozen of our most prominent institutions, have decided to organize departments, whose primary function is that of furnishing a higher training for commercial life.

"The University of Pennsylvania led the way, nearly twenty years ago, by the establishment of the Wharton School of Finance and Economy in 1881, though the real work was not begun until 1883.

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\* Cf. the Foreign Office Report referred to above (p. 260, note †). We give in Appendix I (p. 346), the details of courses offered in eleven public colleges of this kind. A syllabus of the school of business attached to the Ohio Wesleyan University is in the library of the Board of Education. It does not differ essentially from the syllabus of the business colleges of the higher class, in which the element of advertisement is less prominent.

† "The Relation of our Colleges and Universities to Higher Commercial Education," an address . . . by Edmund J. James.

"The University of Chicago, although its original announcement in 1892 included the scheme of a College of Practical Affairs, did not carry out the plan till July 1st, 1898, when it opened a College of Commerce and Politics. The University of California began similar work in its College of Commerce in August, and the University of Ohio in September of the same year. Columbia University worked out a plan for a four years' college course in the year 1899, which will be put into working operation as soon as funds can be obtained.\* In the year 1900 the following institutions inaugurated the work : Dartmouth College, in the Amos Tuck School of Administration of Finance ; the University of Vermont, in its department of Commerce and Economics ; New York University in its School of Commerce, Accounts and Finance ; the University of Michigan in its special courses in Higher Commercial Education and Public Administration ; and the University of Wisconsin, in its School of Commerce. The University of Illinois has requested the legislature for an annual appropriation of 17,500 dollars to defray the expenses of such a department, and it is announced that the University of Iowa will make a similar request."

To this account must be added the following important details, from the report by Dr W. T. Harris, previously referred to (see note, p. 260). "About ten years ago the American Bankers' Association began to direct the attention of educators and the public to the need of a more adequate professional training for young men preparing for business life. A committee was appointed to find out what was being done in this direction in the institutions for higher education in the United States. It was found that the Wharton School of Finance and Economy of the University of Pennsylvania, was the only institution offering a course of study of a grade comparable with the regular collegiate course, and specializing those subjects most important to thorough training for business and citizenship. At the request of this committee, Dr. Edmund J. James, then professor in the Wharton School, gave an exposition of the aim and ends of this school in a valuable paper read before the Association at Saratoga in 1890, in which he also discussed the situation of business education in general in the United States. The association adopted resolutions, recommending the organization of departments similar to the Wharton School in other universities and colleges. Prof. James was then invited to visit the leading educational centres of Europe, and examine their best commercial schools, and present a report on the subject. Prof. James presented his report to the American Bankers' Association in 1893. It was printed by the Association, and was greeted by educators and business men, as the most valuable contribution in aid of higher commercial education yet made in this country.† The agitation begun by the American Bankers' Association has resulted in the establishment of commercial departments in at least two Universities, those of California and Chicago, the improvement of business courses in a number of colleges, and the organization of such courses in other colleges, and in many public and private high schools and academies."

\* Cf. pp. 276 and 405.

† Reprinted in the Report of the U.S. Commissioner of Education for 1895-6.

18. The history of the Wharton School is particularly significant and interesting. We quote *in extenso* from Prof. James's address at Ann Arbor.

"The Wharton School was founded in 1881. Its course was at first only two years, beginning with the junior year in college.\* Its curriculum was composed largely of the ordinary college subjects, taught by men already appointed to teach in the University. The experiment naturally failed, and there was talk of handing back the endowment to Mr. Wharton, on the ground that there seemed to be no special demand for such instruction. It was decided, however, to make a new departure. Albert S. Bolles was appointed Professor of Mercantile Law and Practice, in February, 1883, and entrusted with the organization of the department; Robert Ellis Thompson was retained as Professor of Political Economy; Edmund J. James was called as Professor of Public Finance and Administration; and John Bach M'Master, as Professor of American History, Political, Constitutional, and Industrial, both beginning work in December, 1883. A new era was thus opened for the school, though the two year curriculum, which was open to students upon the completion of the first two years in college, was retained.

When Albert S. Bolles accepted a position in the State Government at Harrisburg, Edmund J. James was entrusted with the practical administration of the school, and later appointed Director. For admission to the curriculum, now lengthened from two to four years, were demanded in general the same requisites as for the classical or technical colleges.† Many new courses were added with a result of strengthening and establishing the department more firmly. Instructors were appointed in the theory and practice of accounting, transportation, banking, journalism, and other practical subjects, besides additional instructors in economics and politics. The four year plan thus adopted by the Wharton School, has been accepted . . . . by most of our institutions which have undertaken this work. As an evidence of the demand for this kind of instruction, the fact may be stated that while the Wharton School course is one of a large number of elective courses offered by the University of Pennsylvania, it has a greater attendance than the average of the courses. The following table shows the attendance from 1895 to 1901 :—

1895	-	-	113		1898	-	-	87		1901	-	-	135
1896	-	-	97		1899	-	-	94					
1897	-	-	101		1900	-	-	125					

The syllabuses of the Wharton School are reprinted in Appendix K (pp. 348–368); they are summarised briefly in what follows :—

Students are admitted to the school (as to the other sections of the University of Pennsylvania) on passing an entrance examination, which differs mainly from similar entrance examinations in England by its requirements in English literature, an obligatory subject for all candidates. The school offers five courses.

- (a) A four year course in Finance and Economy, leading to the degree of Bachelor of Science in Economics.
- (b) A four year course in Commerce and Industry.
- (c) A two year course in Social Work.
- (d) A two year course in Business, Practice, and Banking.

\* The third year of the four years' course.

† "College" is here used in the sense of "Faculty."



(e) A two year course in Commerce, Diplomacy, and International Law; designed to prepare for

(1) The diplomatic service; (2) The conduct of international commercial relations with special reference to South America, and the Far East.

**FOUR YEAR COURSE IN FINANCE AND ECONOMY.**

*Freshman Year.*

	Hrs.		Hrs.
English Composition . . .	2	American History . . .	2
English Language . . .	1	Accounting . . .	3
German or French . . .	3	Physical and Economic Geography . . .	2
Mathematics or . . .	2	Constitutional Law . . .	2
Practical Economic Problems .	2	Journalism . . .	1

*Sophomore Year.*

	Hrs.		Hrs.
English Literature . . .	2	Theory and Geography of Commerce . . .	2
German or French . . .	3	Political Economy . . .	2
European History . . .	3	Legislative Procedure . . .	1
Practical Finance and Foreign Exchange . . .	2	Journalism . . .	2
Business Law . . .	1	Public Speaking (Optional) . . .	1

*Junior Year.*

Courses covering sixteen hours a week to be selected by the student from the following:—

	Hrs.		Hrs.
Logic and Ethics . . .	2	Elementary Common Law . . .	2
English Literature . . .	2	Roman Law . . .	2
Economics . . .	2	Industrial Development of the United States . . .	2
Sociology . . .	2	Journalism . . .	2
Modern Legislative Problems .	2	Charities and Correction . . .	1
American History . . .	2	Race Traits and Distribution .	1
Modern European History . .	2	Practical Politics . . .	2
English Industrial Development	2		
Money and Credit . . .	2		

Senior Year.

Courses covering sixteen hours a week to be selected by the student from the following:—

	Hrs.		Hrs.
Public Finance . . . .	2	American Commerce and Com-	
Public Administration . . . .	2	mercial Relations . . . .	2
English Civilisation . . . .	2	Principles of Government . . . .	2
Social Reformers . . . .	2	Municipal Government . . . .	1
European History . . . .	2	International Law . . . .	1
American History . . . .	2	English Legal Institutions . . . .	2
Transport . . . .	2	Court Decisions on the Federal	
Colonial Government . . . .	2	Constitution . . . .	2
Panics and Depressions . . . .	1	Journalism . . . .	2
Corporation Finance . . . .	1		

FOUR YEAR COURSE IN COMMERCE AND INDUSTRY.

Freshman Year.

	Hrs.		Hrs.
English Composition . . . .	2	Physical and Economic Geo-	
English Language . . . .	1	graphy . . . .	2
Mathematics . . . .	2	Constitutional Law . . . .	2
or Chemistry . . . .	4	Two of the following	
or Practical Economic Pro-		French . . . .	3
blems * . . . .	2	German . . . .	3
Accounting . . . .	3	American History . . . .	2

Sophomore Year.

	Hrs.		Hrs.
English Literature . . . .	2	Political Economy . . . .	2
Practical Finance and Foreign		Legislative Procedure . . . .	1
Exchange . . . .	2	Public Speaking (Optional) . . . .	1
Business Law . . . .	1	Two of the following	
Theory and Geography of Com-		German . . . .	3
merce . . . .	2	French . . . .	3
		European History . . . .	3

\* For those only who present higher mathematics for entrance examina-  
tion.

*Junior Year.*

No studies are prescribed as obligatory. Courses covering sixteen hours a week to be selected by the student of which twelve are to be taken from the following:—

	Hrs.		Hrs.
Economics . . . . .	2	Industrial History . . . . .	2
American Commerce . . . . .	2	Economic Resources of Europe	
Money and Banking . . . . .	2	and the United States . . . . .	2
Commercial Treaties . . . . .	1	Recent Changes in Industry . . . . .	1
Corporation Law . . . . .	1	Modern Legislative Problems . . . . .	2
Commercial Products . . . . .	1	Field-Work. Study of Business	
English Literature . . . . .	2	Methods * . . . . .	2

*Senior Year.*

No studies are prescribed as obligatory. Courses covering sixteen hours a week are to be selected by the student, of which twelve are to be taken from the following:—

	Hrs.		Hrs.
Finance . . . . .	2	English Civilisation . . . . .	2
European Commerce . . . . .	2	International Law . . . . .	2
Colonial Government . . . . .	2	Race Traits and Distribution . . . . .	2
Economic Resources of Tropical		International Trade and Ship-	
Countries . . . . .	2	ping . . . . .	1
Causes of Industrial Supremacy	2	Inland Trade and Transporta-	
		tion . . . . .	1
		Commercial Credits . . . . .	1

## COURSE IN SOCIAL WORK.

[This course of the Wharton School does not come under the head of Commercial Education, and is only mentioned for the sake of completeness.]

\* With reference to this course, the syllabus adds, that "the students visit the larger industrial establishments of Philadelphia, and study the organization and extent of the business done by each of them. This is followed by a study of the methods of conducting business in the leading branches of transportation, manufacturing and commerce. Some lectures are given by men actually engaged in business."

COURSE IN BUSINESS PRACTICE AND BANKING.

First Year.

Subject.	Hours per Week.	
	1st Term.	2nd Term.
1. Accounting . . . . .	3	-
2. Corporation Accounting . . . . .	-	3
3. Physical and Economic Geography . . . . .	2	2
4. The Money Market . . . . .	2	-
5. Domestic and Foreign Exchange . . . . .	-	2
6. Banking Law and Practice . . . . .	1	1
7. Problems in Economics and Finance . . . . .	2	2
8. American History . . . . .	2	2
9. American Political Institutions . . . . .	2	-
10. European Political Institutions . . . . .	-	2
11. English Composition . . . . .	2	2
12. English Language . . . . .	1	1
	17	17

Second Year.

Subject.	Hours per Week.	
	1st Term.	2nd Term.
13. Business Law . . . . .	1	1
14. Theory of Money and Credit . . . . .	2	-
15. Modern Banks of Issue and Deposit . . . . .	-	2
16. Political Economy . . . . .	2	2
17. History of Banking . . . . .	2	-
18. Panics and Depressions . . . . .	-	2
19. Investment and Speculation . . . . .	2	-
20. Financing of Trusts and Corporations . . . . .	-	2
21. Monetary History . . . . .	2	2
22. Public Finance . . . . .	2	2
23. American Commerce . . . . .	2	2
24. English Literature . . . . .	-	2
25. English Literature . . . . .	2	-
	17	17

## COURSE IN COMMERCE, DIPLOMACY, AND INTERNATIONAL LAW.\*

First Year.	Hrs.	Second Year.	Hrs.
1. American Diplomacy . . .	2	10. Recent Diplomatic History of Europe . . .	2
2. Constitutional Law . . .	2	11. International Law . . .	2
3. Modern Legislative Problems . . .	2	12. Jurisprudence, or Money and Banking . . .	2
4. Political Economy . . .	2	13. Government of Colonies and Dependencies . . .	2
5. American Commerce and Commercial Relations . . .	2	14. European Commerce and Commercial Relations . . .	2
6. Practical Finance and Foreign Exchange . . .	2	15. Economics . . .	2
7. Race Traits and Distribution . . .	1	16. Public Finance . . .	2
8. Economic Resources of Europe and the United States (with Exercises in Research Work) . . .	2	17. Economic Resources of Tropical Countries (including Asia and South America) . . .	2
9. English (Expository Composition) . . .	1		

19. The College of Commerce and Politics of the University of Chicago can hardly be said at present to offer "higher commercial education" in the same sense as the University of Pennsylvania. The four years' curriculum, leading up to a degree of Bachelor in Philosophy, includes little or nothing not included in English University Courses on Political Economy and Political Science. There are no special technical courses. †

\* Any one desiring to enter for this course, must first satisfy the Committee on Special Students that he is qualified to undertake the work.

† Since the above was written, the University of Chicago has decided to follow the example of the Wharton School, and has appointed a number of "merchants, practical bankers, and other leaders in the industrial and commercial world" as teachers in the College of Commerce, and the list given below is to be extended. The following appointments to professorships have been made (according to the *Chicago Chronicle* of Wednesday morning, September 25th, 1901, from which the information in this note is derived) :—

FRANKLIN H. HEAD,—*Iron Industry.*

H. F. J. PORTER, of the Bethany Steel Company,—*Steel.*

JAMES H. ECKELS, ex-Comptroller of the United States Treasury,—*Banking.*

E. H. ABBOT, of Boston,—*Railroad Finance.*

GEORGE F. STONE, Secretary of the Chicago Board of Trade,—*Boards of Trade.*

PAUL MORTON,—*Railroad Organization.*

LOUIS JACKSON, of the St. Paul Railroad,—*Railway and Industrial Development.*

JAMES MAKIN,—*Place of Advertising in Business.*

A. F. DEANS, of the Springfield Insurance Company,—*Insurance.*

"Journalists and diplomats" says the *Chicago Chronicle*, "will be enrolled on the layman staff at a later stage. An effort is being made to secure the services of the managing editor of a leading Chicago paper; and a course of lectures on 'Socialism' (? social work) by some man identified with the practical work. An industrial museum is also to be established in connection with the University."

The unit of work in the college is a “major,” a course pursued for five days in the week during one quarter.

The work of the Junior College (covering the first two years of the course) is as follows (18 majors):—

Political Economy	-	-	1 major	English	-	-	3 majors
Political Science	-	-	1 major	Mathematics	-	-	2 majors
History	-	-	3 majors	Science	-	-	2 majors
Sociology	-	-	1 major	Elective *	-	-	1 major
French or German	-	-	4 majors	Elocution	-	-	2 hours a week during 2 quarters
				Physical Culture	-	-	4 half-hours a week during the 6 quarters

The work of the Senior College (covering the second two years of the course) is as follows, 18 majors, half prescribed, half elective. The prescribed courses are given below:—(See Appendix L, p. 369).

Political Economy	{	Principles of Political Economy	-	-	-	-	1 major
		Economic and Social History	-	-	-	-	1 major
		Public Finance	-	-	-	-	1 major
Political Science	{	Federal Constitutional History of the United States	-	-	-	-	1 major
		Introduction to the Common Law	-	-	-	-	1 major
		The Elements of International Law	-	-	-	-	1 major
History	{	Europe in the Nineteenth Century	-	-	-	-	1 major
		Recent American History	-	-	-	-	1 major
Sociology	{	Sociological Conception of Society (considered with reference to . . . Politics)					1 major

20. The University of California is organizing an extensive course, even wider in range than that of the University of Pennsylvania; but the scheme is still inchoate.

21. The four years' course of the University of Wisconsin (see also Appendix M, pp. 370–374) is as follows:—

Freshman Year.

1st Semester.	Hrs.	2nd Semester.	Hrs.
Economic Geography	2	Economic Geography	2
Economic History of England	2	American History	4
German, French, or Spanish	4	Foreign Language, continued	4
English	3	English	3
Physics	3	Physics	3
Trigonometry	2		
Drill and Gymnastics	2	Drill and Gymnastics	2
	18		18

\* This term is used for a course selected at the option of the student.



*Sophomore Year.*

1st Semester.	Hrs.	2nd Semester.	Hrs.
History of Commerce . . .	2	Business Organization and Management . . .	2
Mediaeval History . . .	3	Elementary Economics . . .	3
Foreign Language, continued . . .	2	Modern History . . .	3
Chemistry . . .	4	Foreign Language, continued . . .	2
English . . .	2	Chemistry . . .	4
Elective . . .	3	Elective . . .	2
Drill and Gymnastics . . .	2	Drill and Gymnastics . . .	2
	18		18

*Junior Year.*

1st Semester.	Hrs.	2nd Semester.	Hrs.
Commercial Law . . .	3	Money and Banking . . .	3
Transportation . . .	2	Transportation . . .	2
Foreign Language, continued . . .	2	Foreign Language, continued . . .	2
Nineteenth Century History . . .	3	Generation and Transmission of Power . . .	3
Elective . . .	8	Elective . . .	8
	18		18

*Senior Year.*

1st Semester.	Hrs.	2nd Semester.	Hrs.
Social and Economic Legislation, including tariff laws, consular regulations, labour laws . . .	3	Social and Economic Legislation . . .	3
Materials of Commerce . . .	3	Materials of Commerce . . .	3
Foreign Language, continued . . .	2	Foreign Language, continued . . .	2
Thesis . . .	2	Thesis . . .	2
Elective . . .	8	Elective . . .	8
	18		18

It will be noticed that this course is distinguished by the inclusion of *obligatory* scientific courses. While alternative courses like those of the University of Pennsylvania have not been drawn up, the choice of studies allows the student to select a course fitting him for the special business career he intends to follow.

22. The course “tentatively proposed” at the University of Vermont is on the same lines as the courses of the University of Wisconsin.\* The Freshman and Sophomore (1st and 2nd) years of the undergraduate, are to be devoted to general studies (which *must* include French, German, and history); the Junior and Senior (3rd and 4th) years, to a course containing a certain amount of commercial instruction. It will be seen, however, that the scheme proposed is much less specialized than that of the University of Pennsylvania.

The courses suggested are as follows :—

*First Year of Commercial Course (3rd University Year).*

(Sixteen hours a week made up of the “required” and “elective” studies.)

Required.	Hrs.	Elective.	Hrs.
Economics . . . . .	3	History . . . . .	3
Modern Languages . . . . .	3	Logic . . . . .	3
English . . . . .	2	Mathematics . . . . .	3
American Civil Institutions . . . . .	3	Physics . . . . .	4
Accounting . . . . .	3	Sociology . . . . .	3

*Second Year of Commercial Course (4th University Year).*

(Sixteen hours a week, as before.)

Required.	Hrs.	Elective.	Hrs.
Economics . . . . .	3	History . . . . .	3
Constitutional Law	2	Social Law . . . . .	3
Comparative Politics }			
International Law . . . . .	2	Commercial Law . . . . .	2
Banking . . . . .	2	Modern Languages . . . . .	3
English . . . . .	1		

Students are strongly advised to take as an elective subject one of the physical sciences for one year, and a course in history for one year.

23. While Harvard has organized no degree course in Commerce, the Department of Economics offers a remarkably strong and varied list of courses on economic, industrial, and commercial subjects, including a recently established course on the Principles of Accountin g.

\* For the complete syllabus see Appendix N., pp. 374–376.

Each full course consists, as a rule, of three lectures weekly during the year; each "half-course," of three lectures weekly during the half-year. The titles of the courses, of which details are given in Appendix O (pp. 377-386, under numbers quoted here in brackets) are as follow:—

PRIMARYLY FOR UNDERGRADUATES.

1. Outlines of Economics. [1.]

FOR UNDERGRADUATES AND GRADUATES.

2. Economic Theory. [2.]
3. The Principles of Sociology. [3.]
4. Socialism and Communism (half course). [14<sup>1</sup> hf]
5. The Mediæval Economic History of Europe *or* the Modern Economic History of Europe (in alternate years). [10 and 11.]
- \*6. The Economic Organization and Resources of European Countries. [17.]
- \*7. The Economic History of the United States. [6.]
8. The Labour Question in Europe and the United States (half course). [9<sup>2</sup> hf]
- \*9. Problems of Industrial Organization (half course). [9<sup>2</sup> ahf]
10. Statistics; Theory, Method, and Practice (half course). [4 hf]
- \*11. Railways and other Public Works (elementary half course). [5<sup>1</sup> hf]
- \*12. " " " (advanced half course). [5<sup>2</sup> hf]
- \*13. Money, Banking, and International Payments. [8.]
14. Financial Administration (half course). [7<sup>1</sup> hf]
15. Theory and Methods of Taxation, with special reference to the United States (half course). [7<sup>2</sup> hf]
16. Selected topics in the Financial History of the United States (half course). [16<sup>1</sup> hf]
- \*17. The Principles of Accounting (half course). [18<sup>1</sup> hf]
- \*18. Principles of Law in their application to Industrial Problems. [21.]

PRIMARYLY FOR GRADUATES.

19. The History and Literature of Economics to the Opening of the Nineteenth Century. [15.]
20. Methods of Economic Investigation (half course). [13<sup>2</sup> hf]
- \*21. A General View of Insurance (half course). [19 hf]
22. Seminary in Economics (for instruction in methods of independent investigation). [20.]

In a special paragraph certain courses, marked with a star in the above list, are recommended as "Courses Preparing for a Business Career," courses 17, 18, and 21 being "designed more particularly to aid in the understanding of the problems likely to be met in business life," "arranged with special regard to the needs of those looking to such career," and intended "primarily for students who have reached or approached the close of their general education." Obviously Harvard intends to go no farther for the present, and sets her face against a commercial course for the degree of bachelor. It must be mentioned that the Department of Economics forms with the Department of History the "Division of History and Political Science"; † and to obtain

† The Lecture Courses are divided into three sections: History, Government, and Economics. The section described here gives an idea of the scale on which the studies are organized.

Final Honours in Political Science, with the degree of A.B. of A.M., students must present for approval, in the final year of preparation, a plan of study comprising "not less than five courses, not elementary, selected from those offered under History, and Government, and Economics, including at least one course in Economics, one in History, and one in Government. He is examined on these courses at the degree examination, besides being submitted to an oral examination of a general character. He is allowed to present a thesis on any part of the work chosen.

The Dean of the Department of Economics, Prof. W. J. Ashley, has recently been appointed Professor and Head of the Faculty of Commerce in the University of Birmingham.

24. The educational policy of Harvard has been followed on somewhat more distinct lines, and with greater specialization in commercial subjects, by the organisers of the new Amos Tuck School of Administration and Finance. This school has recently been founded in Dartmouth College, one of the oldest of the higher colleges in the United States, by Mr. Edward Tuck, who gave a sum of 300,000 dollars in memory of his father, the Hon. Amos Tuck, a former trustee of the college, and approved of the money being devoted by the present trustees to its present purpose.

A number of professorships and of lectureships have been instituted, and, in addition to a number of courses on Economics and Economic History, Political Science, etc., special courses are offered in—

1. Corporation Finance.
2. Money Markets and Speculation.
3. Industrial Resources and Industrial Organization.
4. Accounting and Auditing.
5. Insurance.
6. Investments.
7. Practical Banking.
8. Transportation, including Railroad, Service, Water Transportation and Foreign Commerce.
9. Theory and Technique of Statistics, including Commercial Statistics.
10. Commercial and Corporation Law.
11. Public Finance.
12. Public and Municipal Administration.

These courses, it is added, will be arranged to meet the needs of individual students.

According to the syllabus (reprinted in Appendix P. pp. 386–395), the aim of the school is to give—

*First*, a body of knowledge and principles, applicable to any form of business organization and management—the training which is needed by the business man as such.

*Secondly*, a more special preparation for banking, insurance, and railroad service, as well as for domestic and foreign commerce, the diplomatic service and public administration.

*Thirdly*, such further teaching and training as will prepare men for journalism, and for participation in civic affairs. With this end in view, a series of two years' courses have been drawn up.

The first year's course for all students consists of classes occupying eighteen hours a week, selected from the following list (subjects 9 and 10 being, however, practically obligatory).

Advanced History.	{ 1. European Political History, 1789 1878. 2. United States Political History, 1783 1879. (These courses must be preceded by courses on Mediæval and Modern History.)
Advanced Economics.	{ 3. American Industrial Development. 4. History and Theory of Money. 5. Advanced Economic Theory.
Advanced Political Science.	6. American Constitutional Law.
Advanced Sociology.	{ 7. Anthropological Geography. 8. Social Statistics and Applied Sociology.
Advanced Study of two Foreign Languages.	{ 9 and 10. Advanced work in two of the three languages, German, French, and Spanish.
English	11. English.

In the second year special courses are to be assigned to each student to equip him for the career he intends to follow. Groups of courses have been selected under the following heads—General Mercantile Business, Banking, Railroad Service, Foreign Trade, Insurance Administration, Journalism, Training for Civil Affairs.

The distinctive feature of the courses is that they are intended not to replace, but to be grafted on to, or to follow, the ordinary degree course.

Thus students may take as the fourth year of their degree course the first year course at the Amos Tuck School.

If they have not done this they must present a Bachelor's degree, and, as will be seen from the above list of courses, they must show evidence of previous study in History and Economics.

25. The University of Michigan follows the same general plan as Dartmouth College, but instead of grafting a two years' commercial course on to a three years' preliminary training, this University grafts a three years' commercial course on to two years' preliminary training. The degree of Bachelor is

to be conferred, according to the usual custom, after the fourth year of residence; that of Master of Arts after the fifth year's work. It appears from the syllabus, however, that the three years' commercial course will be opened to students not desiring a degree without insisting on the two years' preliminary work.\*

The preliminary work, as at Dartmouth, is made to include a considerable amount of History, general and economic and of Political Economy.

The number of hours of college work required from each student is sixteen. Of these a student taking the commercial course must devote ten to subjects selected by the Special Committee in charge of the course, during the first two years of his course, the remaining six being given to "electives," while in the third year of the course the Committee claim the entire time of the student. The following programme is presented in the syllabus for 1901-1902 (reprinted in Appendix Q, pp. 395-405), as suggesting the most appropriate order of elections:—

*First Year of Commercial Course (3rd University Year).*

First Semester.		Second Semester.	
Subject.	Hrs.	Subject.	Hrs
Social and Industrial Reforms .	4	Science of Finance . . .	3
Commercial Geography of the Extractive Industries† . .	3	Commercial Geography of the Manufacturing Industries .	3
Theory and History of Money .	2	Theory and History of Banking	2
General Electives . . . .	7	Statistics . . . . .	1
		General Electives . . . .	7
	16		16

*Second Year of Commercial Course (4th University Year).*

First Semester.		Second Semester.	
Subject.	Hrs.	Subject.	Hrs.
Problems in Political Economy .	4	Administration of Corporate and Public Industries . .	2
Resources and Extractive Indus- tries† of the United States .	3	The Manufactures of the United States . . . .	3
Commercial Law . . . .	3	Commercial Law . . . .	3
Science of Accounts . . . .	2	History of Industrial Chem- istry or European Com- mercial Geography . . .	2
General Electives . . . .	4	General Electives . . . .	6
	16		16

\* See Appendix Q, p. 402. The time of enrolment in the case of candidates for a degree, is at the beginning of the third year of residence.

† Under this head are included Agriculture, Horticulture, Forestry, Fisheries, Mining, etc.



*Third Year of Commercial Course (5th University Year).*

First Semester.		Second Semester.	
Subject.	Hrs.	Subject.	Hrs.
The Distributive and Regulative Industries of the United States	3	Transportation Problems <i>alternating with</i> Administration of Corporate and Public Industries	3
Technique of Foreign Trade	3	Commercial European Geography	2
The Money Market	2	American Trade with China, Japan, and the Philippines	2
Labour Laws of the United States and Europe	2	History of Industrial Physics	2
Thesis Seminary	2	Business Organization	2
		Thesis Seminary	2
	12		13

A somewhat special feature in the programme is to be found in the courses on the History of Industrial Chemistry and Industrial Physics. The student is supposed to have pursued elementary courses in these subjects. In the course on Chemistry "he learns of the manner in which chemical principles have been applied in the development of chemical technique, and prepares himself to judge intelligently proposals for the further application of such principles." The course will not begin in 1901-2, because no class is yet prepared to profit by it.\*

26. Arrangements have been made between the New York Chamber of Commerce and Columbia University for the opening of a school of commerce in the University. A provisional scheme drawn up by a joint committee of the two bodies, is reprinted in Appendix R, pp. 405-417.

## VI. GENERAL REMARKS.

27. The problem of commercial education in the United States has, at the present moment, a particular interest for England. In both countries there is a desire to do something and a movement forward, but no clear and universal policy such as we get in countries with a powerful and autocratic ministry of education. It is a time of beginnings and experiments, mainly

\* Obviously a person devoting himself mainly to economics and the various branches of business cannot become a chemist by the way. But, bearing in mind Mr. Balfour's dictum that no knowledge is "superficial," although its possessor may be, a course of this kind, showing the past achievements of applied science may be regarded as valuable in opening the minds of business men to its future possibilities.

(though not wholly) suggested hitherto by Continental example. The impossibility of borrowing a policy, the danger of borrowing details haphazard, from foreign systems of education, has been pointed out recently by Mr. Sadler. But despite differences of economic condition, of organization, and of national temper, which we need neither forget nor exaggerate, England and the United States possess a share of common tradition which renders the educational experience of either altogether indispensable to the sister-country. And perhaps the position is made most evident when we remember the great difficulty which Englishmen have in applying the word "foreign" to anything "American."

We have attempted, in the preceding pages, to give an outline sketch of American commercial teaching. It is proposed in what follows to draw more special attention to certain general questions arising out of this teaching, which must necessarily be considered in England as well as in America.

28. Commercial education in the United States until quite recently consisted, as we have seen, of the education of the business colleges, through which, probably, a majority of American business men have passed. In minor matters these colleges have valuable lessons to offer to the *teachers* in our polytechnics and evening-continuation classes.\* But their chief feature, the business-practice scheme, is that which it is most important to consider. With regard to the value of "business-practice" (see above, pp. 240–252), which has not yet been introduced into this country to any considerable extent,† there is difference of opinion. In its favour must be quoted first and foremost its survival, and the immense use made of it in the United States; and also its employment at the great school at Antwerp‡ and many schools on the Continent, of which the school at Neuchâtel, in Switzerland, may be regarded as a type.§ In their recent book on "Commercial Education at Home and Abroad" (pp. 46–55), Messrs. Hooper and Graham, and Mr Whitefield in his "Commercial Education," treat the work as forming an essential

\* In the matter of book-keeping Mr. G. van de Linde expressed the opinion that "what passed for book-keeping in schools was nothing of the kind," and Mr. J. A. Baker, of Messrs. J. A. Baker & Sons, Milling Engineers, said that in regard to book-keeping we compare badly with the United States and Canada. "American Commercial Schools, and indeed most of the common day schools, teach this useful subject much more perfectly than we do."—"Report of the Sub-Committee on Commercial Education of the London County Council," 1899, pp. 27, 30, and 31.

† Mr. Whitefield in his "Commercial Education," p. 230, *et seq.*, gives "an account of the scheme of work adopted at the Liverpool School of Commerce," and Messrs. Hooper and Graham in "Commercial Education at Home and Abroad," give a general account of the methods introduced into the Technical Schools of the West Riding of Yorkshire (without details of any particular school).

‡ See Mr. Sadler's article on "Higher Education at Antwerp," *Special Reports*, vol. iii., pp. 566–8, 596, 599.

§ See p. 240 above, and also Mr. Montague Barlow's evidence before the Sub-Committee of the Technical Education Board of the London County Council, 1899, Report, p. 12, and his paper read before the London Chamber of Commerce Conference, 1898, Report, p. 43.

constituent of a commercial course. Mr. P. E. J. Hemelryk, Vice-Chairman of the Liverpool Chamber of Commerce, and Chairman of the Liverpool School of Commerce, has spoken most emphatically in its favour; he calls it "the crowning point of commercial education."\*

On the other hand, French opinion, we are told, is adverse to the system, and the *bureau commercial* has been abandoned in

\* In "Commercial Education: our Colleges," by P. E. J. Hemelryk, Liverpool (printed by Rockliff Brothers), an interesting pamphlet. The author supposes the business practice or commercial teaching of the bureau to begin at 17 or 18, and regards as its necessary preliminary a somewhat formidable programme of acquired knowledge: "*Superior Commercial* French, German, and Spanish, mercantile arithmetic, dealing with percentages, interest, exchanges, and the conversion of foreign measures into English ones, or *vice versa*, algebra in its applications to the solution of difficult questions in accountancy, political economy, natural science, physics and chemistry, commercial law and the leading principles of international law, history and geography—political and commercial—these would form the scientific basis of the future merchant's education, which would be further developed by careful studies in book-keeping and accounts current, with a watchful eye for the simplest and most expeditious methods, the nature of public funds, banking, joint-stock companies, insurance—life, fire, and marine. Mental arithmetic would have been constantly practised, and the ability to write any one or two languages in shorthand would also prove a great advantage. Drawing, too, and a certain amount of artistic knowledge will prove of inestimable value to many merchants and manufacturers. Granted that the student having now reached the age of 17 or 18, has gone through all the above, then he is quite fit to enter upon the labour of the bureau, which will gradually, under the guidance of an able master, open his eyes to the utility of all the studies which I have enumerated. Mr. Hemelryk's list of subjects rivals the famous list of Milton's *Tractate*. American authorities have been less ambitious. We must refer the reader to Mr. Hemelryk's pamphlet for his practical description of the stages in his bureau. We quote a passage on the classification of bureaux contributed to Mr. Hemelryk's pamphlet by Mr. Montgomery, the recently-appointed Director of the Bureau of the Liverpool School. "The varied forms of 'Commercial Bureau,' or 'Training Office,' obtaining in Europe, America, and Japan, may be classified as follows:—*Form 1*, in which all the pupils go simultaneously, and step by step, through the operations, rising out of a business transaction, or series of business transactions, and that under the guidance of an experienced teacher, who shows them what to do, and how to do it, by doing precisely the same thing. *Form 2* requires the teacher to represent the outside world, and to invite the independent judgment of the pupils as to the manner of dealing with the letters and other material reaching them through him. In *Form 3*, the master is replaced by the students in turn. In *Form 4*, by a group of students representing a firm whose transactions are followed and copied by the class. In *Form 5*, groups of students represent different firms, and deal not only with the class (which has now itself dwindled to a group), but with each other. To these groups may be added groups in home and foreign schools, or even public firms willing to enter into correspondence and to carry out simulated transactions with the school under consideration. The final and most advanced form of such a 'Bureau' is that which does actual business on its own account, as is the case, for example, with the International Academy of Trade in Zurich, which has an annual turnover in banking and goods business of several millions of francs. This last feature is, however open to grave objections on the part of the mercantile community."

the French schools.\* Miss Flora C. Stevenson, Chairman of the Edinburgh School Board, spoke (in her evidence before the Edinburgh Committee on Commercial Education †) with some contempt of "make-believe offices," but chiefly it would seem on *a priori* grounds.

The great weight of opinion must therefore be said to be in favour of "business-practice" in a "model-office." A thorough investigation of the best American business colleges by an English expert, is urgently needed at the present time.‡

29. Passing from the "business college" to secondary commercial education, we come to much more difficult ground. "One thing, at any rate," Mr. Sadler wrote in 1898, "is quite clear, that all persons of experience heartily reprobate the thrusting of so-called 'commercial subjects' into the curriculum of secondary day schools . . . There is also a fairly general agreement that secondary education ought to be a purely liberal education up to sixteen at all events."§

At the Conference on Commercial Education, held by the London Chamber of Commerce in July, 1898, Sir B. Samuelson declared that the paper read by Rev. C. W. Bourne had "once for all put an end to the illusion that it is expedient to have special commercial education in secondary schools," and quoted the Reports of the Hamburg Chamber of Commerce for 1896, and 1897, in support of the view that future lawyers, doctors, and commercial men should be educated together until the age of 17 or 18.||

The joint Sub-Committee of the Edinburgh Merchant Company, the Edinburgh Chamber of Commerce, and the Leith Chamber of Commerce, in their Report (Edinburgh, 1900, p. 6.) recommend "that commercial subjects properly so-called should not be taught at school,¶ and Mr. I. Levinstein, of the Manchester

\* According to Mr. Cloudesley Brereton ; see the "Report of the Proceedings of the Conference on Commercial Education," held by the London Chamber of Commerce, 1898, p. 60. See also Mr. Sadler's article on "Higher Commercial Education in Antwerp," etc., *Special Reports*, vol. iii., 567.

† Report of joint Sub-Committee of the Edinburgh Merchant Company, Edinburgh Chamber of Commerce, and Leith Chamber of Commerce, 1900, p. 28.

‡ It must be mentioned that Mr. Bernard de Bear, the Principal of Pitman's Metropolitan School, probably the most important analogue of the American business colleges in this country, saw the American colleges in 1895 and gave a brief account of his visit to the International Congress on Technical Education held in 1897 (Proceedings, p. 189). Mr. de Bear describes the teaching of office routine as better, but the *individual* teaching in shorthand and other subjects as less good than the teaching in this country.

§ *Special Reports*, vol. iii., pp. 581-2.

|| At the same conference Mr. Hemelryk said, "give the boys up to the age of 15 or 16 a classical education, let them know something of foreign languages ; but let them, from the age of 16, devote themselves entirely to foreign languages and remain at school till they are 19."

¶ The recommendation is continued as follows : "but that, as provided for in the Scotch Code with reference to Higher Grade Commercial Schools, 'the study of Arithmetic, of History and of Geography should have a commercial application.'"

Chamber of Commerce, made an interesting speech at the meeting of the Association of Chambers of Commerce held last March (1901) in support of the same view.\*

The views of these various authorities are not in such close agreement as they seem at first sight. They are, indeed, all at one in maintaining with the authorities consulted by Mr. Sadler in 1898 that purely commercial subjects should not be taught before the age of 16 (Mr. Hemelryk says 15 or 16). But between Sir Bernhard Samuelson and Rev. C. W. Bourne, on the one hand, and the rest of the authorities on the other, there is a difference of opinion with regard to the best employment of the two years from 15 or 16 to 17 or 18.

If we now turn to the movement in America we find opinion distributed in almost exactly the same way. A glance at the commercial courses of the high schools (see pp. 254-260) shows that in most of the programme extremely little time is given to purely technical subjects for the first two years (for pupils aged from 14-16). We, as before, exclude from this category commercial geography and commercial arithmetic, which in no way clash with the most liberal of educations. Thus it is only from 16 to 18 that the commercial subjects become a really important feature of the teaching. We may say, therefore, that there is a general consensus of opinion against introducing any appreciable amount of technical commercial teaching into secondary school programmes before the age of 16.

The whole difference of opinion, so far as it appears in the documents available, resolves itself into a difference of opinion with regard to the best employment of the two years from 16 to 18. The designers of the new programmes for the commercial high schools (and for the commercial courses in the ordinary high schools) declare themselves partisans, no less than their opponents, of a "liberal secondary education." They are convinced that most commercial subjects can be so treated that boys and girls, while receiving the training of faculty and character, and the civilising influences which stand for secondary education, can simultaneously acquire a useful insight into the organization of commerce, and the dexterity and accuracy in dealing with business details which is successfully given by the business college. Mr. Crissy tells us that in the secondary commercial schools and courses recognized by the University of the State of New York, "it has been the aim of the University to make the high school business course fully equal in disciplinary value to any other course in the school."† Many of the advocates of the

\* Report of the 41st Annual Meeting of the Association of Chambers of Commerce, 1901. "Let us give our youths a liberal general education, let them learn business for a year or two; then let them be sent abroad to learn languages and to acquire the knowledge of foreign goods, foreign business habits, and foreign customs, and they would return quite as well equipped for commercial life as the best of foreign clerks." Mr. Levinstein proceeded to advocate higher commercial education in a university for those likely to take responsible positions in commercial houses.

† Private letter dated September 24th, 1901. (See p. 237 above.)



secondary commercial courses regard them as the best possible preparation for a business career. Mr. Crissy, himself, however, welcomes them as meeting a demand, but after all only as a *pis aller*. "The public high schools," he writes, "are meeting the growing demand for business education, and meeting it with increasing success. Their commercial courses covering four years are of great value. They will keep in the high school many pupils who otherwise would not have remained, and graduates\* will come out with a well-rounded general education. But these schools, I think, cannot, without a very considerable increase in business school equipment and teaching forces, give the actual practice in counting house, transportation office, bank and intercommunication work, and general trade which the thoroughly equipped proprietary business schools are prepared to supply, and which constitute such an important part of the preparation for business life."

Mr. Crissy goes on to point out that the higher commercial courses in the universities do not aim at giving this business practice, and concludes as follows: "For such as can take it I would regard the following as an ideal course for a thorough and liberal business education.

- (1) A classical or scientific [not a commercial] course of four years in a high school [14-18 years].
- (2) A year of technical training in a registered business school [18-19 years].
- (3) A graduate course in a commercial school or college [university] grade [19-23 years].†

The view expressed by Mr. Crissy has weight because it comes from a specialist in commercial education. The same view with regard to the value of non-specialised secondary education was expressed by one of the greatest authorities in America on education generally, President Eliot of Harvard.

"An indispensable element in the training I have in view," said President Eliot, "is a sound secondary education; that is, an education in a first-rate school, public, endowed, or private, which occupies the whole school-time of the pupil from 13 or 14 till 18 years of age. This secondary education should include the modern languages—an essential part of a good preparation for the higher walks of business life. It may or may not include Latin or Latin and Greek. Thus the German non-classical secondary education is a very substantial preparation for business life, although it includes no technical subjects whatever."—("Commercial Education, an Address to the National Export Exhibition, Philadelphia," 1899. Reprinted in the *Educational Review* (U.S.A.), xviii., 417.)

For a boy who intends to follow a commercial course in a university, there may well be a danger that too early an

\* The English reader may be reminded that boys and girls who pass satisfactorily through a *school* course are said to graduate.

† I. O. Crissy, *loc. cit.* "Business," p. 565. The words in brackets have been inserted by the writer of this article.



acquaintance with his subject may make him "stale." The danger is one that exists with all technical subjects and that is frequently overlooked. (See also p. 292, below).

30. But whatever opinion may be held as to the ideal scheme of commercial education, secondary commercial courses now exist, and they raise a series of problems which must be dealt with. They overlap, but manifestly they do not coincide with, the problems of the *Realschule* which have already been discussed in this series.\*

With regard to certain features of the preliminary training required for a business man, every one is agreed; the importance of mathematics, and especially of arithmetic,† of geography and of foreign languages, is acknowledged universally.

In addition, the Americans in the Commercial High Schools, as in their business colleges and universities, lay the greatest stress on mastery of the mother-tongue, both in writing and speaking (see also p. 253, above). This is a feature not only of commercial education, but of all education in the United States, and if it is insisted upon here, it is because in English education it is generally conspicuous by its absence.‡ The introduction of English Language and Literature into the ordinary school curriculum in the United States seems to have been due to the academies, of which probably the first example was founded at Philadelphia § through the efforts of Benjamin Franklin ¶, and incorporated in 1753.

That the teaching of English in America is absolutely satisfactory from our English standpoint, it would be difficult to say. The programmes of teaching are in many cases above all criticism, but if we may judge by the specimen exercise-books sent over to the Paris Exposition, the results are often unsatisfactory in every branch but the pure business-letter of an elementary character. The training seems in some instances definitely directed towards the production of "rhetoric" in its worst sense.¶ The question of training in English composition

\* *Special Reports*, vols. i., iii., and ix

† For American views on the teaching of arithmetic in schools, see Appendix E, pp. 330-338.

‡ Before the Scotch Sub-Committee of the Edinburgh Merchant Company, etc., previously alluded to, one business man after another spoke of the inability of boys to compose a business letter. Cf. Report pp. 8, 14, 18. Cf. also the volume of this series on "Preparatory Schools," pp. 51, 52, 59, 72, 90.

§ "Monographs on Education in the United States," edited by N. M. Butler (for the Paris Exposition of 1900) vol. i. "Secondary Education," by Prof. E. E. Brown, pp. 149 and 153. This particular academy developed into the University of Pennsylvania.

¶ In his autobiography, Franklin has given a most valuable account of the way in which he taught himself to write, which teachers might consult with profit.

¶ The exercise-books examined by the writer were from high schools of the ordinary type—not from commercial high schools. The question involved here, is not merely one of good and bad teaching, but of standard. There seems to be in America a double standard in the use of words: the standard of the American classics, which coincides with that of English classics approximately, and a standard to be found not only in newspapers

is a very large one indeed, raising the widest possible issues, and can only be mentioned here in passing.

31. One great difficulty in teaching commerce has to be faced, and is obviously being faced, by the advocates of the new schools in America—the ethical difficulty. “A merchant shall hardly keep himself from wrong-doing” wrote the author of Ecclesiasticus. Is not the same view implied in our modern English legend “school for the sons of gentlemen only?” A newer moral conception of commerce is excellently stated by Dr. C. A. Herrick, the Director of the extremely liberal Commercial Course of the Central High School of Philadelphia.\* “More than a hundred years ago,” he writes, “the world was startled with the declaration that in international trade both sides might be gainers. We recognize this at present as true for nations, but hardly so for individuals. Gain is popularly regarded somehow as illicit; if one party to a transaction has a profit, then it is felt that the other must have a corresponding loss. A generation of business-men must be trained that shall see in business neither the giving nor the taking of advantages, but instead a social service for which one may expect compensation.” †

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but also in more serious productions, and certainly in approved school essays. The actual value of the latter kind of literary currency is, so to speak, less than its face value. We, in England, love to buy a six shilling novel for four shillings and sixpence, and prefer this (so the booksellers tell us) to a book sold for four shillings and sixpence net. In America, there is a similar discount to be taken off certain modes of expression. In both cases there seems to be a more or less conscious and voluntary self-deception or piece of “play.” At a certain political crisis the American correspondent of the *Times* warned English readers that the language used by the American newspapers had a much less formidable significance in the minds of the writers and of the American public than that which the English reader would naturally attribute to it. The elimination of this style of expression from school teaching must be a matter of time.

To emphasize our point we may note as an example the following passage from the “Addresses and Proceedings of the National Educational Association” for 1899 (pp. 1025–1030). It may be contrasted with profit with the expression of similar views by other writers quoted in the text.

“The Commercial High School,” said Mr. W. C. Stevenson of the Department of Book-keeping and Penmanship in the State Normal School of Emporia, Kansas, “is here. It is based on principles eternal, and is a product of the heart universal. Business is becoming recognized as more than secularity. Its mission is no less divine than teaching or preaching. It may be above and beyond the realm of mere materialism. The study of it, giving power to earn a living, and advancing our national commercial prosperity, may also develop character, and become a means of grace; and so long as ambition lives in the hearts of men, or a government exists by the people and for the people, so long will the light of education *for use*, falling upon the fields of human toil and the pathway of human sorrow, help to transform earth into a suburb of the New Jerusalem.”

\* See p. 255.

† “The Content and Educational Value of the Curriculum for a Secondary School in Commerce.”—“Addresses and Proceedings of the National Educational Association,” 1900, pp. 543–549. The reader is referred for a useful discussion of the general problems of Commercial Education to an elaborate essay on the subject by Dr. Herrick, published as the Supplement to the Fifth Year-book of the National Herbart Society, Chicago, 1900, 8vo.

It is evident that so long as business is regarded by teachers as "merely a means of earning filthy lucre," or even only of "making money," either the subject or the teacher is unfit for the purposes of education. There are special reasons for misunderstanding on the part of teachers and professional men generally, with regard to business. In the processes of business the financial aspect of each transaction is necessarily kept in the foreground, while the actual service to the community, for which payment is made, appears to be secondary. Under existing circumstances a teacher or a doctor is paid for his services no less (though possibly on a lesser scale) than a business man. But during the rendering of such service, all thought of payment has actually to be put aside, if the service itself is to be successful. Again, the professional man in his professional work has the constant opportunity, and frequently the desire, to give a portion of his services without reward, because his services are from man to man. In the case of a business man the relations between himself and the persons whom his work is ultimately destined to serve (*e.g.* those between a merchant in the home-trade and the users of the needles he supplies) are so remote that the opportunities for benevolence in the course of his business are necessarily fewer. No one would pretend that the average business man is less charitable than the professional man. But he is benevolent chiefly outside his business; the professional man is benevolent in the actual exercise of his profession. And hence not the business man but "business" is often looked down on from the "high moral standpoint" as a morally inferior occupation by the professional classes, and, to speak plainly, by those in the teaching profession. It is also regarded as an intellectually inferior occupation, by those unacquainted with the complexity of modern business and the administrative ability which it demands, but that point may be, for the moment, left aside; the misunderstanding with regard to the moral question is more serious because it does not, like the other, cure itself of necessity.

That schoolmasters who look down on business are often constrained to educate boys for a commercial career, and to set before them some kind of ideal in life, is certain. Some escape from their difficulty by distinguishing between an "ideal" ideal, separated by a definite gulf from the attainable, and a lower "practical" ideal, to which life may approximate. The efficacy of an ideal recognised by the teacher as a second-class ideal may be doubted. More often than not the ethical teaching of the school touches only in the vaguest way, if at all, on the actual problems, both fundamental and subordinate, which every boy entering on a business career is bound to deal with directly (I do not say always consciously). Is it not due to this absence of early guidance that the boy himself often comes to the view that "business is business," the irresponsible acquisition of wealth its sole object, that is, precisely to the view that by avoidance of the subject, his teacher has ineffectually tried to conceal from him.

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"Why do they prate of the blessings of Peace? We have made them a curse,  
Pickpockets, each hand lusting for all that is not its own ;  
And lust of gain, in the spirit of Cain, is it better or worse,  
Than the heart of the citizen hissing in war on his own hearthstone ?

"But these are the days of advance, the works of the men of mind,  
When who but a fool would have faith in a tradesman's ware or his word ?  
Is it peace or war ? Civil war, as I think, and that of a kind  
The viler, as underhand, not openly bearing the sword."

So spoke the hero of Tennyson's "Maud" in passionate denunciation of English commerce and its ways.

An American writer, with a different end in view, writes of his own fellow countrymen, with humorous overstatement, as follows:—

"A little over a century ago, we were a nation of three millions who loved liberty ; to-day we are seventy millions who love money. We have given up the worship of Almighty God for the worship of the almighty dollar, and the historian of future years will write us down as belonging to the dollar age."\*

Despite its ironical form, the statement is put forward as a plea for the establishment of secondary commercial education, on the ground that "commercialism is one of the dominant forces of our civilization."

We are in England extraordinarily tolerant of inconsistencies in our teaching, in our systems of education. We proclaim our principles only under compulsion. We have been content for years to use the word education constantly as if it meant only instruction in school subjects, while in our schools we have fortunately practised education in a very different spirit. But in dealing with commercial education, the teacher will have to be clear and outspoken. The question "is it right?" will crop up again and again, and will require a definite answer. Is Tennyson's warlike hero right in denouncing business as the business of the "pickpocket?" Do we agree with the American writer that this is the "dollar-age?" The master definitely training boys for business can no longer evade the varied problems of commercial ethics, and he must be grateful to American writers like Dr. Herrick for pointing out our duty and indeed our necessity in this matter.† That the duty is a simple one to fulfil, no one can suppose. The detailed investigation of the ethical problems involved in every economic problem offers a field full of the most vital interest to the professors and students in the higher schools of commercial education, to which we now turn.

\* "The Claims of Business Education in our Public Schools," by J. H. Francis, Head of the Commercial Department, Los Angeles High School, California. "Addresses . . . of the National Educational Association," 1899, pp. 1008.

† In the Philadelphia High School Course, "Ethics of Business" forms a special course in the fourth year (age 18) see p. 255. The present writer does not plead for the formal teaching of business ethics but for a readiness and ability to discuss the problems of business ethics incidentally as they occur in the school teaching.

32. That commerce offers a field of investigation demanding the highest powers to deal with from the philosophical standpoint, and that its study is a proper subject for University Professors, has long been recognized by the creation of chairs of Political Economy in our Universities. It has been recognized also that the field is so large that no one man can cover it efficiently. It would shock no one to have Professors of Political Economy dealing with Foreign Trade exclusively, or Banking exclusively, or Commercial Geography exclusively. But at the notion of a Faculty of Commerce and Professors of Commerce, a good many are shocked in England and America.

Nor are their objections trivial. In so far as the objectors may regard commerce as a subject intellectually beneath the dignity of a University, they are, it is true, fighting a lost battle.\* But in all probability what is really objected to is the introduction into the University of a course training men to an ideal of material gain which shall take its place, side by side, and on equal terms, with the ideal of culture. We have already discussed this moral question in connection with secondary schools. We have first to consider, not the question of a possible sacrifice on the part of the University to the interests of the business man, but the question whether that sacrifice, if made, would have any value. That is what is being discussed ardently both in America and in the United Kingdom at the present time.

The question may be presented in the following precise form:—

(1) Is it possible to devise a University course in commerce which shall fit a man for business in the same way as a University course in medicine fits a man to be a doctor: a course which shall positively be of more use to him in his future career than the actual experience of business which he would acquire in the time allotted to such a course?†

And to this question has been tacked on a subsidiary question, one of educational organization.

(2) If the answer to the above question be "Yes," should the commercial course be an "under-graduate" or a "graduate" one, or a course partly under-graduate, partly graduate?

Mr. James Branch Taylor, in an important and elaborate essay, has summed up the answers given to the main question by both opponents and advocates of the new courses in America, and has given his own conclusions.‡

\* A "sound commercial education" has meant poor instruction in "elementary book-keeping," too long in England for its significance and effect to be lost quite suddenly.

† "We do not pretend to finish a business man's education, but to begin it. We hold that we can give him in four years' teaching, a better equipment than he would gain in the same period in actual business experience." Dr. R. P. Falkner of the Wharton School, "Report of the International Commercial Congress, Philadelphia," 1900, 5th day's session, p. 16.

‡ "College Education and Business," *Educational Review* (U.S.A.) March, 1900. The writer regrets that the proportions of this article do not allow him to give a fuller account of Mr. Taylor's essay, which is dealt with independently by Mr. H. T. Mark, in his article on "Education and Industry in the United States," this volume p. 155.



The text of this essay, together with Prof. James's important contributions to the subject (see pp. 233, 261, 262, above), and the address by Principal Eliot, previously referred to (see p. 281, above), should be consulted for further details.

The opponents of University education bring two main arguments against it.

In the first place, they say that to succeed, a boy must begin business early, and a University course would render this impossible. In support of this argument, Mr. Taylor quotes the names of twenty great business men,—“surname men” as he calls them—including Wanamaker, Rockefeller, Gould, Carnegie, Morgan, Clews, Vanderbilt, Peabody, and Armour, for whom the average age of entering business was  $16\frac{1}{2}$ , and the age of entering into partnership, or its equivalent, was 22. “To succeed in business, you must be interested in it heart and soul, and this identification of a man with his occupation,” says a powerful opponent of University training,\* “can only be acquired in the early and plastic years of a man's career.”

The second argument is that not only does the University lose precious years to the business man, but it makes him positively unfit for his work by sterilising what business faculty he may possess. Mr. Carnegie, in a statement quoted by Mr. Taylor (without a precise reference) asserted that:—

“The almost total absence of the graduate from high positions in the business world seems to justify the conclusion that College education, as it exists, is fatal to success in that domain. The graduate has not the slightest chance, entering at twenty, against the boy who swept the office, or who begins as shipping clerk at fourteen. The facts prove this.”

Mr. Clews (also quoted by Mr. Taylor) says:—

“I do not employ college men in my banking office, none need apply. I don't want them, for I think they have been spoiled for a business life.† The college man is not willing to begin at the bottom. He looks down on the humble places, which he is fitted to fill. And, indeed, he looks down on all business as dull and unattractive. . . . His thoughts are not with his business, but with his books, literature, philosophy, Latin. Now no man can approach the exacting business life in that half-hearted way. Business requires the undivided mind.

“I think that a man has just so many niches in his brain. In each niche so many facts, . . . as it were, fit, and then the niche is full. Now, at college a man is busy filling up the niches, and if he goes through college in the right way, his niches are all full.‡ No, . . . the college man is not the

\* Mr. Henry Clews, quoted by Mr. Taylor, *loc. cit.*

† Messrs. Brown, Shipley & Co., the American bankers of Founder's Court, E.C., prefer University men and employ many. Report of the Sub-Committee on Commercial Education of the London County Council, 1899, p. 27.

‡ Mr. Clews's psychology is open to criticism, but this does not affect his view of the actual effect of University training.



successful man in money affairs. It is the man who has started in as an office boy and who gets the education of keenness and practical knowledge that comes from early contact with business men.

\* He has his natural sharpness and originality, and the edge of it is not dulled by ideas and theories of life entirely out of harmony with his occupation.<sup>7</sup> †

Mr. Carnegie's significant proviso<sup>‡</sup> with regard to University education "as it is," gives the key to the answer made by the advocates of the new movement to these formidable indictments. They agree that University education has not, so far, met the requirements of the future business man, but they assert that it may be made to do so fully: that just as the old system of apprenticeship to an apothecary, of which sweeping out the surgery formed the first stage, has been replaced by an organized system of medical education, so the present system of business apprenticeship will be replaced by an organized system of business education: and that a form of college education is actually being devised which will equip most quickly and in the best way, the "average to first rate man," with the positive knowledge he requires for a business career, while in no wise stunting his interest in commerce or the activity of will essential for success.<sup>‡</sup>

\* On the other hand, that distinguished economist, the late General Francis A. Walker, speaking, no doubt, largely from American, and especially American commercial, experience, but, unfortunately, quoting no examples, wrote: "It is the one fatal weakness of the self-made man, that, at any point in a successful career, there is a liability to collapse, or to the commission of first-class errors almost beyond the power of the well-educated man to commit. The ghastliest mistakes of life are those of self-made men, theretofore successful whether in war, in politics, in professional practice, or in business. It might almost be said that the greater the degree of previous success, or the more uniform that success, the greater becomes the danger that at some critical point, the self-made man will over-estimate his own powers: or foolishly despise some really formidable antagonist or competitor who does not answer to his notions, derived from a limited experience, of what may make an antagonist or competitor formidable, or under-rate some evil liability, because it is of a novel type; or take one thing for another on account of some superficial resemblance; or in some way or another commit the capital blunder of his life. And, it is true also, that the fatal errors of self-made men largely occur after the period of life when they might, perhaps, have been repaired. The educated man makes his mistakes at or near the start. The self-made man is more likely to make his when it is too late either to learn from them or to surmount their difficulties." *The Relation of Professional to Technical Education*, reprinted from the *Educational Review* of 1894, in the posthumously published *Discussions on Education*, 1899, p. 66.

† Especially significant in view of his great benefactions to the Universities of Scotland and to the University of Birmingham.

‡ See for instance, President Eliot's paper referred to above, p. 281. But it must be added that in special cases Principal Eliot regards a University training of the usual type, followed by travel, as the best training for business life. Thirty per cent. of Yale graduates for 1891—3 entered on a business career. The proportion of such graduates which had steadily increased since 1831, may have increased still further since. (*Yale Review*, Nov., 1896, quoted by Dr. Herrick, *loc. cit.*)

The expression "average to first-rate man" has been used by the present writer, so as to dispose of the favourite argument drawn from the example of successful men of genius. It is obviously true that these have overcome all difficulties in the way of obtaining the knowledge necessary for success, and that what they have done others from time to time will do. But to suggest that they have achieved success because of the difficulties placed in the way of their obtaining technical knowledge, would be equivalent to suggesting that all electricians should begin, like Faraday, as bookbinders, or that all novelists should begin, like Thomas Hardy, as architects. For the attainment of *national* commercial success, it is obviously wise to make the acquisition of wide technical knowledge easy, if that can be done without too great a sacrifice either of time, or of interest in the ultimate business career.\*

33. In the view of Mr. Taylor, the special courses in commerce should as a rule be entered on at the age of sixteen or seventeen, "after a high school course,† in order to secure the "early identification with the work of life," demanded by Mr. Carnegie and Mr. Clews.

Mr. Taylor gives, in answer to the second objection to a University education for business men, namely that such an education sterilises the business faculty, a sketch of the situation inside the University, which it does not seem possible to accept as adequate or satisfactory.

"In how far," he asks, "do our colleges contribute to clear unhindered vision, and the habits of close observation? To what extent do they promote the talent of moving to certain ends by chosen means and selected combinations? How far do they cultivate independence, firm-knit individuality, a manly assertion of self in the world?" implicitly stating thus what he regards, and no doubt justly regards, as the requisites for successful business life.

In reply to these questions he suggests that twenty-five years ago the Universities, dominated by the "cloister spirit," the "introspective attitude," did none of these things (*loc. cit.* pp. 237-238). He contrasts what he looks on as a *disappearing* University ideal of "culture for its own sake," "the serenity of thought which found its enjoyment in the contemplation of its own

\* Mr. Bryce (quoted by Mr. Whitefield, *loc. cit.*, p. 244), said in an address to the Associated Chambers of Commerce in 1892: "A man of the highest capacity would make way without education; a man of the lowest capacity could not be made anything of by education; but between these two extremes there lay a class which has never failed to profit by good training, but who would have come to comparatively little if they had not had that training. It was for that majority they pleaded, to whom education made all the difference, and it was from that majority that young men must be trained for their business houses."

† The high school course is generally supposed to be completed at eighteen so that there is some uncertainty here as to Mr. Taylor's meaning. The matter is important. (See p. 280 above.)

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It will be an evil day for the community when the "cloister-spirit," the contemplative ideal, and the love of pure investigation disappear from University life, and Mr. Taylor, by a happy inconsistency, implies that he shares that view. But the firmest adherents to the old state of things must see, from past experience, that it is impossible for a University in which youths are prepared for social life to pretend to stand wholly aloof from that life; nor would it be of ultimate good for the University for its teachers to shut their eyes to the experiments, social, political, scientific, carried out on a large scale in the laboratories of the world, nor to refuse their help in training men to carry on experiments in special departments of the world's activity. We must remember indeed that two "technical" faculties, those of law and medicine are as old as the Universities themselves. In modern times one technical subject after another has taken its place side by side with these. Pure Chemistry opened the way for Applied Chemistry; Mathematics and Physics led to the introduction of Engineering and Electrical Engineering; and these subjects are taught in Universities, or institutions of University rank, everywhere. The teaching of such subjects has been constantly opposed by men inside the Universities as "un-academic," by "practical men" outside as useless. But they have gradually won almost universal recognition.

It seems hardly likely that in England the somewhat artificial distinction of Germany between the Universities and the Higher Technical Colleges will be maintained in dealing with higher commercial teaching.\*

The present battle is not then, as Mr. Taylor would have it, a new, but an old battle fought over again, and to which only one ending seems possible. The school of commerce is bound to take its place by the side of the school of engineering in our places of higher education.

Again if (considering for the moment English Universities) we look not at the atmosphere that prevails within their walls, but at the men whom they have sent into the world, we see at once that they can scarcely be said to kill "the spirit of masterful reaction with an external world" by higher education. It is a familiar fact that they have been the nurseries of many of our greatest statesmen down to the present day.

34. Nevertheless in the attack of Mr. Clews and Mr. Carnegie and in the almost as dangerous defence of Mr. Taylor,

\* In Germany a distinction exists between the *Technische Hochschulen* and the Universities, and in accordance with this tradition the Leipzig *Handelshochschule* does not form part of the University. Mr. A. E. Twentyman has shown that the distinction is due to difference of historical origin, not to arbitrary discrimination. To be admitted to the *Technische Hochschulen*, a boy must, as a rule, have passed through the classes of a secondary school, and their teaching is of a University type, (see *Special Reports*, vol. ix., p. 465.) The only institution in England at present organized on this model is the Central Technical College of the City and Guilds of London Institute, at South Kensington.

there remains more of truth than out and out admirers of our present educational ideals may willingly admit. The loving admiration for the achievements of science (and by this I mean the German *Wissenschaft*, the learning that advances) in our older Universities has produced results which are small in the past century in comparison with the corresponding results achieved in other countries, the achievements of our amateurs, on the other hand, are exceptionally splendid, especially in the physical and natural sciences. Do not these circumstances point to a certain sterilising influence at work, either in the Universities themselves, or in the schools preparing for the Universities, and one seriously to be reckoned with in dealing with commercial education?

The subject was attacked in Dr. Schuster's admirable presidential address to section A of the British Association in 1892. "Is it not true," he said, "that the one distinctive feature which separates this from all other countries in the world is the prominent part played by the scientific amateur, and is it not also true that our modern system of education tends to destroy the amateur?"\* An amateur, Dr. Schuster defines, as "one who learns his science as he wants it and when he wants it." The ordinary English business man at the present day is an amateur of this kind.

The next passage, although written with reference to the education of men of science, contains matter of especial significance in its application to the commercial education of the future in England.

"Whatever is taught in early years must necessarily be taught in a more or less dogmatic manner, and in whatever way it is taught, experience shows that it is nearly always received in a dogmatic spirit. It seems important therefore to confine early training to those subjects in which preconceived notions are considered an advantage. It is to me an uncongenial task to sound a note of warning to the older Universities. . . . But I cannot help expressing a conviction that their highly specialized examinations for entrance scholarships are a curse to all sound school education, and will prove a still more fatal curse to what concerns us most nearly, the progress of scientific knowledge. If school education could be more general, if scientific theories could only be taught at an age when a man is able to form an independent judgment, there might be some hope of retaining that originality of ideas which has been a distinctive feature of this country and enabled our amateurs to hold a prominent position in the history of science. At present a knowledge of scientific theories seems to kill all knowledge of scientific facts."†

The very progress of science and scientific industry makes originality of ideas in commerce more than ever an absolute necessity for the business man. He must be constantly ready to deal with fresh situations as they arise, and an education that would take his freshness of idea away from him would be almost worse than no education at all.

\* By "our modern system" the speaker referred to education generally and not only to that in Great Britain.

† British Association Report for 1892, p. 629.

Against the special danger of premature specialization we have seen that the advocates of commercial education are already to some extent on their guard. But is premature specialization sufficient to account entirely for the evils to which Dr. Schuster drew attention? Does not the evil extend to other subjects than natural science? Lord Rosebery pointed out in a recent speech at the Birmingham and Midland Institute that the great fault of our education all round was its lack of training in independent thought, and suggested that this was (at any rate in part) due to excessive reading.\* It is a subject which it is impossible to discuss at all adequately here.† But it will be generally admitted that the examination system, often abused too indiscriminately, is partly to blame for our present deficiencies. Without attempting to deal with remedies, it may be pointed out that while examinations are useful as tests, the mental *attitude* of working for an examination is discouraging to originality (however honest the work may be and putting all question of cramming aside). Examinations cannot be dispensed with; but their bad effects ought to be neutralised by the introduction of other elements into our educational system, or the strengthening of elements already present. The whole attitude of working to do not what a man thinks best himself of his own independent judgment, but what he believes some one else will think best, is an attitude of the nursery prolonged into adult life. It kills, or tends to kill, originality, and if we cannot get rid of a teaching that constantly encourages or compels this attitude, higher commercial education will be a serious danger rather than an advantage to our national commerce. It will be noticed that in the best American schools independent work in the "seminar" forms an essential part of the higher commercial course. The students will not only learn from the teacher; they will learn how to learn, and to form their own judgments by a study of the facts. A "pass-school" would be of the most doubtful advantage in higher commercial education.

If the teaching in the best American schools is on a level with the programmes, it will be seen that "pass-schools" in commerce are there left out of the question. The alternative between an advanced four-year undergraduate course and a course either partly or wholly graduate, preceded by special study in economics and history, takes us on to a higher plane. But to discuss such an alternative with advantage requires study, not of programmes, but of actual teaching and results.

35. The impulse in this country towards commercial education, both secondary and higher, is one that is rapidly gaining strength. The English business man is being hard pressed

\* "I am inclined to think that there are few needs of our nation which are more clamant than the need of independent thought." Report in the *Times*, October 16th, 1901.

† The writer has attempted to define the situation somewhat more closely in an article on *The Teaching of Style in . . . Schools*, *Fortnightly Review*, June, 1902.



by the American and by the German. In most of the markets of the world. Certain markets he has already lost to his competitor. His supremacy is at least threatened. And the best and increasing success of the foreigner is put down to greater skill in superior education, both general and technical. It is to be remembered, however, that both in Germany and in America special commercial education is a thing of the recent past. Its effect is now becoming apparent in commerce. Satisfactory secondary education, Lord Avedon's report is now said perhaps somewhat sweepingly, does not exist [in England]. At any rate, general reform in secondary education, and the introduction of special commercial teaching in secondary schools will be admitted to be a supreme necessity for our business men. But the nation has made Englishmen anxious to lose no time in copying the latest foreign example and has not and to create special teaching of commercial subjects immediately. Unfortunately the special teaching demands special teachers and these are at present hard to be had. To send the schools will mean incompetent teaching, which is better to have no instruction at all.

It has been provided of teachers the American have in some of the Universities passed the initial stage. The English have done for the American Bankers Association, a few years ago that the teachers in the great commercial schools of which it gave them a sketch were not that to be had for any of money. They had to be trained.

D. K. F. Finkner of the University of Pennsylvania said of this subject in 1890:

"The business man considers that college and university education is something to be obtained by degrees, to be acquired by dint of experience but by argument. We are doing something and a deal more than we are doing it well with a distinct purpose and a definite method."

But a like opinion that it can be done in a year or two is frequently from the mouths of educational authorities. They tell us and it admits self-evident that they cannot teach the subjects that are called for teaching business affairs will be actually changed in business, certain measures will which the college teaches, and of course. But it is at once to suppose that the alternative between successful business men and an education is an impossibility. Not what we are not waiting. We want first of all teachers. Experience has shown that great lawyers do not make a great law school, nor great physicians, nor a great medical school, nor great school of music or great teachers who have not the means and the will to give the highest to the educational struggle of the citizen.

The need of commercial classes in colleges is regarded by competent authorities as a comparatively recent question.

See the report of the report of the Special Sub-committee of the Board of Education of the City of New York.

1890, p. 2.

Report of the International Commercial Congress at Philadelphia, 1890, p. 100, section 1, p. 100.

world. The successful man of business may know nothing of teaching what he knows. Practical accountants make poor teachers of book-keeping.\*

"The difficulty of obtaining a suitable teaching force is not peculiar to this type of education, nor is it insuperable here. It is less to-day than it was fifteen years ago. The men who teach are not necessarily the men who do. There is a type of mind which perceives without acting, just as there is one which acts without perceiving. In earlier days this type was represented in business matters by the financial editors of the daily press, the editors of trade and commercial journals, the secretaries of commercial bodies. To-day it is represented further by an ever-growing flood of young men who leave our colleges and universities trained in the principles of economic thought, but capable of mastering the mechanism of economic processes. Men can be found to-day, and will be found in the future, in even greater numbers, capable of giving the instruction which an intelligent, enlightened and progressive higher commercial education demands."

But there are not only teachers whose intellectual tastes lead them to the study of business, there are business men who have the desire and capacity to teach, and who would be willing to teach in our Universities during a part of their time. It is so at any rate in America, as will be seen from the syllabuses of the Amos Tuck School (p. 387) and of the Wharton School (p. 357, Field-work). The University of Chicago, as we have seen (p. 268, note †), has just appointed a large number of additional professors on the staff of her College of Commerce and Politics, who are all engaged in commercial undertakings, and the Universities of Wisconsin and Columbia University will pursue the same plan (Cf. pp. 374 and 408). Principal Lodge, of the University of Birmingham, speaking at University College Liverpool, on Civic Universities† said:—

"If we are to raise the general level of commercial training, and make it worthy of the greatness of the part which commerce plays and always has played in the history of the world, we shall have to take a medical school as our pattern. One man cannot do it; a whole faculty is necessary, and the greater number of that faculty will, I expect, be men not holding endowed chairs, nor able to spare much time for teaching, but men really and actively engaged in the work itself; men of ability, leaders in business, who, like the prominent doctors in a city, may be willing to come down for an hour a day, or a few hours a week, and give to students the benefit of their great and always growing experience. I do not say that it will be an easy matter to find men of business able and willing to do this, but I see no other way of getting it done that is likely to be half so good. I see no other way of dealing with the multifarious details and the immense variety of business transactions in such a place as this; and even now I feel that in this city we could put our finger on men who are competent to teach, and who might be willing to teach, and to fill up the outlines and

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\* Is not the analogy between a Faculty of Commerce and a Faculty of Law or Medicine pushed a little too far here? In the Faculty of Medicine the student sees carried out before him, and practises, the actual operations of his art, and it is essential that he should have good models in practice as well as lucid and competent teaching of theory. Do great Schools of Medicine exist without great physicians? The analogue of 'hospital practice' must surely be found in business itself and not in the University. Possibly a scheme in which some of the students' time was spent in actual business might recommend itself to business men.

† Speech delivered at University College, Liverpool, on October 13th. Report in the *Manchester Guardian*, October 14th, 1901.

fundamental principles laid down by a few endowed professors, from a sense of public spirit and a feeling of duty which they owe to the coming generation and to the welfare of the country at large."

36. The principle of getting help from men in the outside world of affairs has been adopted in the only complete higher commercial school at present existing in England, the London School of Economics and Political Science, founded in 1894.\* This institution of the first rank is at present essentially graduate in character, the average age of its students being between 23 and 28.† Although it has recently been incorporated in the University of London, the fact that it is not directly connected with any institution training undergraduates renders it at present more directly comparable with the Paris *École Libre des Sciences Politiques* than with the Faculties of Commerce in the American Universities. The establishment of degrees in commerce by the University will, doubtless, modify its curriculum to some extent.

Elsewhere in this country there are only beginnings to record in higher commercial education. Of the three Colleges of the Victoria University, two (Owens College, Manchester, and University College, Liverpool) have co-ordinated the important lecture courses in Economics and Commercial Law already existing, and added to them a certain amount of special teaching so as to form "Higher Commercial Courses." The third college of the University, the Yorkshire College, is preparing a scheme for next session. At University College, Liverpool, which first began the work, more stress has been laid on the teaching of the bureau (to which allusion has already been made on p. 278), teaching which does not enter into the American University curriculum. At Manchester the teaching of languages has been extended, and, in addition to courses in French and German, courses in Spanish, Italian, Arabic and Chinese are offered.‡ Courses on Commercial Law, open to all students, have long formed a prominent feature in the Owens College Law School. At Liverpool the School of Commerce is managed by a joint Committee of the Chamber of Commerce, the Senate and Council of University College, and the Liverpool City Council. Both the City Council and the Lancashire County Council contribute towards the funds of the school. In Manchester, the teaching, although planned by a joint Committee of the Manchester Chamber of Commerce and the Owens College, is under the sole control of the College. It receives financial support from private subscribers and from the Lancashire County Council, but none from the City Council. But both in Manchester and Liverpool the funds at present at the disposal of the Colleges are altogether insufficient for the development of University schools

\* See *Special Reports*, vol. ii., p. 76, 1898.

† London School of Economics. "Brief Report on the work of the School since 1895, 1899, pp. 21-22.

‡ Mr. E. H. Parker, late H.B.M. Consul, has been appointed Professor of Chinese at the Owens College.

of the first rank, like the Wharton School, or the Amos Tuck School, although it is evident that cities like these, with their immensely varied industries and businesses, form the best possible centres for Faculties of Commerce.\* The University of Birmingham has received an endowment of £50,000 for its Faculty of Commerce. Mr. W. J. Ashley, Professor of Economic History, and Director of the Department of Economics in Harvard University, has been appointed to the Professorship of Commerce in the new Faculty, and has been requested to devote the first year of his tenure of the chair to the organization of the Faculty, which will receive students next session.

It remains to be seen whether the older Universities will follow the example of the younger institutions in forming Faculties of Commerce. The important School of Economics at Cambridge already provides amply for the more purely economic teaching of such a faculty, and Professor Alfred Marshall has recently published a "Plea for the Creation of a Curriculum in Economics and associated branches of Political Science," which, if adopted by the University, would bring to the Cambridge teachers both more students and a greater opportunity in every way of making their influence felt. At Oxford with a system less well organized than that which already exists at Cambridge, there is also a desire to develop the School of Economics, and Mr. L. L. Price has recently put forward a plea for its extension. Oxford has the advantage of possessing, in addition to its teaching of pure Economics, the important School of Geography presided over by Mr. H. J. Mackinder.

The conferences held by the Society of Arts in 1897 and by the London Chamber of Commerce in 1898, the important Reports published by the Sub-Committee on Commercial Education of the London County Council, in 1899, and the Edinburgh Joint Sub-Committee† on Commercial Education in 1900, and the annual discussions on Commercial Education at the meetings of the Associated Chambers of Commerce, give substantial evidence of a general movement which is bound to produce more results before long.

To conclude formally a paper of this kind, dealing chiefly with schemes and curricula not yet fully carried into effect, is impossible from its very nature. It has indeed been the task

\* The Owens College has just received a valuable gift of Commercial Travelling Scholarships from Mr. J. H. Gartside. The foundation consists of an annuity of about £1,100 a year for ten years, to be spent in scholarships, of which not less than three will be offered annually. The first year of tenure is to be spent in Manchester, the second abroad. The value of the scholarship whilst held in England will be about £80, whilst held on the Continent about £150, and in America about £250. The scholarships are open to male persons of British nationality under 23 years of age.

† Of the Edinburgh Merchant Company, Edinburgh Chamber of Commerce and the Leith Chamber of Commerce.

of the writer rather to offer materials for discussion than to discuss (except in the case of one or two questions of general educational policy), and especially to render more available the large and rapidly accumulating mass of documents on Commercial Education in the United States, with a view to their utilization in this country.\*

P. J. HARTOG.

NOTE.—Since the above was written there has been received at the Board of Education Library a copy of a memorandum of great interest to students by Prof. W. J. Ashley, on the purpose and programme of the Faculty of Commerce in the University of Birmingham, together with a statement of its curriculum and of the Regulations for the Degree of Bachelor of Commerce.

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\* Several of the points discussed in this article have been treated simultaneously by Mr. Zensaku Sano in his article on Commercial Education in Japan, in *Special Reports*, vol. viii., p. 555, and by Mr. M. E. Sadler in his article on Recent Developments in Higher Commercial Education in Germany, in *Special Reports*, vol. ix., p. 487; see also vol. ix., pp. 166, 167. The writer desires to acknowledge here various suggestions kindly made to him by his colleague, Professor S. J. Chapman.

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## APPENDIX A.

COURSES OF STUDY IN TYPICAL BUSINESS COLLEGES.<sup>1</sup>

The courses of study in five business colleges, which may be taken as representatives of the best schools in the list of 337, are given below :—

*Peirce School, Philadelphia, Pa.*—This school, which was founded by its present principal, Thomas May Peirce, A.M., Ph.D., is now in its thirty-fourth year. The announcement for the year 1898–99 says :

Peirce School offers three full courses : Business, shorthand and typewriting, and English.

The business course includes bookkeeping, penmanship, commercial calculations and rapid reckoning, business correspondence, commercial law, commercial geography, mercantile forms and customs, banking, finance, economics, business ethics, and civics.

The shorthand course includes shorthand, typewriting, and English, which comprises a thorough review in spelling, defining and use of words, grammar and punctuation, synonyms, etymology, and business correspondence. Business forms and customs are taught, and lectures are given upon civics and business ethics.

The English course gives a practical training in arithmetic, spelling, business correspondence, grammar and composition, geography, penmanship, etc. This is an especially useful course for those who wish to review the common branches to prepare for civil service examinations or for entrance to technical schools and colleges.

*Packard's Business College, New York City.*—This school was started in 1858. Students who are thoroughly prepared to enter a good high school may complete the commercial course in this business college in about one year. The course of study includes bookkeeping, penmanship, commercial arithmetic, commercial law, practical grammar, including correspondence and a critical study of English, shorthand, typewriting, business methods and practice, political economy political history, civil government, commercial geography, parliamentary proceedings.

*Duff's College, Pittsburg, Pa.*—This school was established in 1840 as Duff's Mercantile College, and was conducted for nearly thirty years by its founder, Peter Duff. Since his death the school has been managed by his sons. Fifty dollars pays for a scholarship, unlimited as to time, for completing the full commercial course. The course of study is announced as follows : "Theory and practice of single and double entry, mercantile, private, and national banking, railroad, manufacturing, insurance, commercial calculations and arithmetical training, rapid practical penmanship, business forms, letter writing, orthography and language lessons, lectures on mercantile law, commercial ethics, political economy."

*Bartlett Commercial College, Cincinnati, Ohio.*—The full course in this school may be completed in one year by a student who enters with a good common-school education. The course includes bookkeeping, commercial arithmetic, business penmanship, mercantile forms and customs, correspondence, shorthand and typewriting.

*Metropolitan Business College, Chicago, Ill.*—This school has three departments—the commercial, the shorthand and typewriting, and the English training departments. The last named is designed for students who are deficient in any of the common-school branches. The commercial course is announced as follows : "Bookkeeping, commercial arithmetic penmanship, business correspondence, commercial law, business forms and methods, detecting counterfeit money, banking, insurance, commission, real estate, transportation, brokerage, wholesale, retail, importing, and jobbing."

<sup>1</sup> Reprinted from the Report of the Commissioner on Education (U.S.A.) for 1897–98, Vol. 2. p. 2451.



## APPENDIX B.

EXTRACT FROM THE BUSINESS SYLLABUS OF THE COLLEGE  
DEPARTMENT OF THE UNIVERSITY OF THE STATE OF NEW  
YORK, JANUARY, 1900.

## SYLLABUS.

To elevate the standard of business education in New York and to establish a uniform test for the measure of such education, state business credentials will be granted on examinations conducted by the University. This action is the outcome of a conference between officers of the University and a committee appointed at the national convention of business educators held in Buffalo, July, 1896, it being the unanimous opinion of the conference that the offer of official recognition would encourage and dignify sound business education.

## BUSINESS CREDENTIALS.

Four business credentials are offered as follows:—

- |                                 |                                     |
|---------------------------------|-------------------------------------|
| 1. State business diploma.      | 3. State business certificate.      |
| 2. State stenographers diploma. | 4. State stenographers certificate. |

## REQUIREMENTS.

Diplomas are issued only to those who have a preliminary education equivalent to graduation at a registered high school. If the course taken has not included United States history, civics and economics, regents examinations in these subjects must be passed. Certificates are issued to those who have not this preliminary general education.

## STATE BUSINESS DIPLOMA

To obtain the state business diploma, candidates having the required preliminaries must be certified as having completed a full one year course in a registered business school, or a registered business course of four years in a registered high school, and must pass regents business examinations in

Advanced bookkeeping	Business Arithmetic.
Commercial law	Business practice and office methods.
Commercial geography.	History of Commerce.
Business English.	Business writing.

## STATE STENOGRAPHERS DIPLOMA

To obtain the state stenographers diploma, candidates having the required preliminary education must be certified as having completed a full one year course in a registered business school, or a registered business course of two years in a registered high school, and must pass with honour (90 per cent. and upward) the 100 word test in stenography (academic examination) and the examination in business English and in type writing, including the usual office work of an amanuensis.

\* Candidates for diploma who take the four year business course in a high school obtain the required preliminaries as a part of that course.

† Certificate for the business diploma who obtain only offer the state stenographers certificate as substitute for the work in commercial geography and history of commerce. Applies to the proprietary schools only.

CERTIFICATES.

To obtain the state business certificate or the state stenographers certificate, the candidate is required to pass only the examinations mentioned above under the title of the corresponding diploma.

BUSINESS EXAMINATIONS

Examinations in all business subjects will be given in January and June of each year.

STATE BUSINESS DIPLOMA AND STATE BUSINESS CERTIFICATE.

DATES.

1900.	1901.
June 12-15.	January 22-25.

PLACES.

New York, Albany, Syracuse, Buffalo, and other places in the state where there are 10 or more candidates. Each applicant will be notified as to exact place.

DAILY PROGRAMME.

	9.15 a.m. - 12.15 p.m.	1.15. - 4.15 p.m.
<i>Tuesday</i>	Advanced bookkeeping.	Business arithmetic.
<i>Wednesday</i>	Commercial law.	Business practice and office methods
<i>Thursday</i>	Commercial geography.	History of commerce.
<i>Friday</i>	Business English.	Business writing.

STATE STENOGRAPHERS DIPLOMA AND STATE STENOGRAPHERS CERTIFICATE

Examinations will be held at the above-mentioned places.

DATES.

1900.	1901.
June 14-15.	January 24-25.

DAILY PROGRAMME.

	9.15 a.m. - 12.15 p.m.	1.15 - 4.15 p.m.
<i>Thursday.</i>		Typewriting and amanuensis work
<i>Friday.</i>	Business English.	

ACADEMIC SUBJECTS.

Academic Examinations in stenography, United States history, civics and economics are held four times a year (January, March, June, September) at the above-mentioned places, and those occurring in January, March, and June, are held also at upward of 640 high schools and academies of the state. Candidates for the state business and state stenographers credentials are admitted to any of these examinations, but those not attending schools in which regents examinations are held should send notice to the University at least 10 days in advance, stating in what studies they wish to be examined, that desk room may be provided at the most convenient place. Following is the calendar.

DATES.

1900.	1901.
January 23, 25.	January 22, 24.
March 27.	March 27-30.
	June 11, 13.
	September 24, 26.

## APPENDIX B.

EXTRACT FROM THE BUSINESS SYLLABUS OF THE COLLEGE  
DEPARTMENT OF THE UNIVERSITY OF THE STATE OF NEW  
YORK, JANUARY, 1900.

## SYLLABUS.

To elevate the standard of business education in New York and to establish a uniform test for the measure of such education, state business credentials will be granted on examinations conducted by the University. This action is the outcome of a conference between officers of the University and a committee appointed at the national convention of business educators held in Buffalo, July, 1890, it being the unanimous opinion of the conference that the offer of official recognition would encourage and dignify sound business education.

## BUSINESS CREDENTIALS.

Four business credentials are offered as follows:—

- |                                 |                                     |
|---------------------------------|-------------------------------------|
| 1. State business diploma.      | 3. State business certificate.      |
| 2. State stenographers diploma. | 4. State stenographers certificate. |

## REQUIREMENTS.

Diplomas are issued only to those who have a preliminary education equivalent to graduation at a registered high school. If the course taken has not included United States history, civics and economics, regents examinations in these subjects must be passed. Certificates are issued to those who have not this preliminary general education.

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To obtain the state business diploma, candidates having the required preliminaries must be certified as having completed a full one year course in a registered business school, or a registered business course of four years in a registered \*high school, and must pass regents business examinations in

Advanced bookkeeping.	Business Arithmetic.
Commercial law.	Business practice and office methods.
†Commercial geography.	‡History of Commerce.
Business English.	Business writing.

## STATE STENOGRAPHERS DIPLOMA.

To obtain the state stenographers diploma, candidates having the required preliminary education must be certified as having completed a full one year course in a registered business school, or a registered business course of four years in a registered high school, and must pass with honour (90 per cent. and upward, the 100 word test in stenography (academic examination) and the examination in business English and in type writing, including the usual office work of an amanuensis.

\* Candidates for a diploma who take the four year business course in a high school obtain the required preliminary as a part of that course.

† Candidates for the business diploma, who so elect, may offer the state stenographers credential as a substitute for the work in commercial geography and history of commerce. ‡ Applies to the proprietary schools only.

CERTIFICATES.

To obtain the state business certificate or the state stenographers certificate, the candidate is required to pass only the examinations mentioned above under the title of the corresponding diploma.

BUSINESS EXAMINATIONS.

Examinations in all business subjects will be given in January and June of each year.

STATE BUSINESS DIPLOMA AND STATE BUSINESS CERTIFICATE.

DATES.

1900.	1901.
June 12-15.	January 22-25.

PLACES.

New York, Albany, Syracuse, Buffalo, and other places in the state where there are 10 or more candidates. Each applicant will be notified as to exact place.

DAILY PROGRAMME.

	9.15 a.m. 12.15 p.m.	1 15. -4.15 p.m.
<i>Tuesday</i>	Advanced bookkeeping.	Business arithmetic.
<i>Wednesday</i>	Commercial law.	Business practice and office methods
<i>Thursday</i>	Commercial geography	History of commerce.
<i>Friday</i>	Business English.	Business writing.

STATE STENOGRAPHERS DIPLOMA AND STATE STENOGRAPHERS CERTIFICATE.

Examinations will be held at the above mentioned places.

DATES.

1900.	1901.
June 14-15	January 24-25.

DAILY PROGRAMME.

	9.15 a.m.—12.15 p.m.	1.15—4.15 p.m.
<i>Thursday.</i>		Typewriting and amanuensis work
<i>Friday.</i>	Business English.	

ACADEMIC SUBJECTS.

Academic Examinations in stenography, United States history, civics and economics are held four times a year (January, March, June, September) at the above mentioned places, and those occurring in January, March, and June, are held also at upward of 640 high schools and academies of the state. Candidates for the state business and state stenographers credentials are admitted to any of these examinations, but those not attending schools in which regents examinations are held should send notice to the University at least 10 days in advance, stating in what studies they wish to be examined, that desk room may be provided at the most convenient place. Following is the calendar

DATES.

1900.	1901.
January 23, 25.	January 22, 24.
March 28-30.	March 27-30.
June 12-14	June 11, 13.
September 25, 27.	September 24, 26.

## APPENDIX B.

EXTRACT FROM THE BUSINESS SYLLABUS OF THE COLLEGE  
DEPARTMENT OF THE UNIVERSITY OF THE STATE OF NEW  
YORK, JANUARY, 1900.

### SYLLABUS.

To raise the standard of business education in New York and to satisfy a demand for the measure of such education, state business credentials will be granted to examinations conducted by the University. This action is the outcome of a conference between officers of the University and a committee appointed at the national convention of business educators held at Atlantic City, N. J., during the unanimous opinion of the conference that official recognition would encourage and dignify school business education.

#### BUSINESS CREDENTIALS.

- Business credentials are divided as follows:
- |                                |                                   |
|--------------------------------|-----------------------------------|
| 1. State business credential.  | 2. State business diploma.        |
| 3. State business certificate. | 4. State recognition certificate. |

#### REQUIREMENTS.

The student must be a resident of New York and must have completed the course of study in the high school or its equivalent. The student must be recommended by the principal of the school attended and must have a good moral character. The student must be recommended by the principal of the school attended and must have a good moral character.

#### EXAMINATIONS.

The examinations for business credentials will be held at the University of the State of New York. The examinations will be held at the University of the State of New York.

The examinations for business credentials will be held at the University of the State of New York.

The examinations for business credentials will be held at the University of the State of New York.

#### GRANTING OF CREDENTIALS.

The University of the State of New York will grant business credentials to students who have passed the examinations. The University of the State of New York will grant business credentials to students who have passed the examinations.

CERTIFICATES.

To obtain the state business certificate or the state stenographers certificate, the candidate is required to pass only the examinations mentioned above under the title of the corresponding diploma.

BUSINESS EXAMINATIONS.

Examinations in all business subjects will be given in January and June of each year.

STATE BUSINESS DIPLOMA AND STATE BUSINESS CERTIFICATE.  
DATES.

1900.	1901.
June 12-15.	January 22-25.

PLACES.

New York, Albany, Syracuse, Buffalo, and other places in the state where there are 10 or more candidates. Each applicant will be notified as to exact place.

DAILY PROGRAMME.

	9.15 a.m.—12.15 p.m.	1-15.—4.15 p.m.
<i>Tuesday</i>	Advanced bookkeeping.	Business arithmetic.
<i>Wednesday</i>	Commercial law.	Business practice and office methods
<i>Thursday</i>	Commercial geography.	History of commerce.
<i>Friday</i>	Business English.	Business writing.

STATE STENOGRAPHERS DIPLOMA AND STATE STENOGRAPHERS  
CERTIFICATE.

Examinations will be held at the above-mentioned places.

DATES.

1900.	1901.
June 14-15.	January 24-25.

DAILY PROGRAMME.

	9.15 a.m.—12.15 p.m.	1.15—4.15 p.m.
<i>Thursday.</i>		Typewriting and amanuensis work
<i>Friday.</i>	Business English.	

ACADEMIC SUBJECTS.

Academic Examinations in stenography, United States history, civics and economics are held four times a year (January, March, June, September) at the above-mentioned places, and those occurring in January, March, and June, are held also at upward of 640 high schools and academies of the state. Candidates for the state business and state stenographers credentials are admitted to any of these examinations; but those not attending schools in which regents examinations are held should send notice to the University at least 10 days in advance, stating in what studies they wish to be examined, that desk room may be provided at the most convenient place. Following is the calendar:—

DATES.

1900.	1901.
January 23, 25.	January 22, 24.
March 28-30.	March 27-39.
June 12-14.	June 11, 13.
September 25, 27.	September 24, 26.



## · DAILY PROGRAMME (SUBJECT TO CHANGE IN 1901.)

*January.*

9.15 a.m.—12.15 p.m.

*Tuesday.*  
*Thursday.*      U. S. history.    Stenography.

1.15—4.15 p.m.

Civics.    Economics.

*March.*

*Wednesday.*  
*Thursday.*      U. S. history.    Stenography.  
*Friday.*

Civics.

Economics.

*June.*

*Tuesday.*  
*Thursday.*      U. S. history.    Stenography.

Civics.    Economics.

*September.*

*Tuesday.*  
*Thursday.*      U. S. history.    Stenography.

Civics.    Economics.

## OUTLINE OF WORK.

The special tests for the state business credentials will be based on the following outlines, subject to revision in future editions :—

**ADVANCED BOOKKEEPING.**—The test in bookkeeping demands a higher degree of technical knowledge than is required for the academic examination. It presupposes ability to open and to keep with accuracy the accounts of any ordinary business, including familiarity both theoretic and practical with books of account. Candidates should be able to :

1. Make in proper form (on paper supplied with faint blue lines only) all ruling necessary for a page or folio of any ordinary book of account, or for any statement taken from the books ;

2. Make in good form correct entries of all ordinary transactions, and state clearly the theory in the case of any such entry ;

3. State accurately the particular function of each book used in ordinary business, and show why it is necessary in the business in which it is used ;

4. Show the difference between single and double entry methods, and change any set of books from single to double entry or from double to single entry, and give well defined reasons for each step in the process ;

5. Take up and continue any practicable set of books, in whatever practicable form they may have been kept, whether in mercantile, manufacturing, commission, transportation or banking business, and whether the business be carried on by an individual, a firm, or a corporation ;

6. Make all necessary entries and changes in, and additions to the books of a business when a new partner is admitted, or when its ownership is changed from an individual or a firm to a corporation ;

7. Make out quickly and in good form accurate bills, accounts sales, invoices, statements of account, bills of lading, and every kind of business document in general use, furnish at short notice an accurate statement of the condition of the business as shown by the books, and make at sight the ordinary computations arising in business ;

8. Explain and illustrate technical terms pertaining to accounting or to general business.

*Suggestions.*—The importance of books of original entry should be strongly emphasised, and the student should be instructed that every entry in such books must be so clear that its meaning can not be mistaken.

While it is possible and even desirable to do much of the work of instruction in bookkeeping in well graded classes, where the contact of ardent young minds in judiciously conducted discussion will do much to lighten as well as to brighten the work, yet the great bulk of the instruction must be

essentially individual, and the student should as a rule work independently of other students, but under the watchful eye of a careful teacher.

The student working under this plan has many advantages :---

1. He is not held back by others but is allowed to proceed according to his capacity.

2. He is not pushed beyond his ability by students more rapid in their work, but is allowed to master all work thoroughly as he progresses.

3. He may devote to this subject all the time that he can spare from other studies. Where this arrangement is made, there is no excuse for idleness.

As it is of the utmost importance that the instructor should be sure at all times that each student is thoroughly grounded in the work he has taken and has a clear conception of all the underlying principles, special test exercises illustrating the various applications of the principles of book-keeping may be given to advantage throughout the course. No student should be allowed to go on with his work till he understands fully the details of all the work he has done. Because a student has written up neatly and correctly a set of books of account he is not therefore a book-keeper, unless he can give a clear reason for every entry made and every step taken.

**BUSINESS ARITHMETIC.**—This test requires a high degree of accuracy and skill in business computations, such as weights and measurements arising in different kinds of business (including a practical and thorough knowledge of the metric system of weights and measures), bill-making, percentage, interest, partial payments, discount, insurance, commission and brokerage, computations arising out of partnership settlements and the operations of incorporated companies, taxes and duties, averaging accounts, ratio and proportion, accounts current, stocks and bonds, domestic and foreign exchange.

*Suggestions.*—To facilitate co-ordination with bookkeeping the work in arithmetic may be divided conveniently into four parts :—

1. The four fundamental rules, United States money, factoring, cancellation, common and decimal fractions and denominate numbers, including the metric system.

2. Percentage, including trade discounts, commission and brokerage, profit and loss, simple and compound interest, bank discount, true discount, partial payments.

3. Insurance, taxes, domestic and foreign exchange, stocks and bonds, partnership and partnership settlements, equation of payments.

4. Ratio and proportion, alligation, general average, corporations, national banks, square root, cube root, and mensuration.

Tests should be given as these parts of the subject are severally completed, and the student's progress in arithmetic should keep pace with that in bookkeeping. Rapid calculation should include the four fundamental rules, cancellation, interest and discount. Mental arithmetic should have a place in all written work, whether formally taught or not.

A brief, practical course in mensuration should be given to all students in school either in classes or as a general exercise.

Equation of payments should be performed by the "interest method" in order to afford additional practice in interest computations and to insure a rational view of the subject.

The work in partnership settlements should be done, as far as possible, on paper properly ruled, and accompanied with trial balances and other necessary statements. This method tends greatly to increase the student's efficiency in the knowledge and practice of accounts.

Select as far as possible business problems, and solve them by business methods. Drill extensively in analysis and reasoning, facility and accuracy of calculation and directness and precision in expressing results, aiming always to correlate arithmetic with business.

As the metric system has been adopted so generally in Europe and South America, students should be able to perform all operations under

## APPENDIX B.

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## BUSINESS CREDENTIALS.

Four business credentials are offered as follows: -

- |                                 |                                     |
|---------------------------------|-------------------------------------|
| 1. State business diploma.      | 3. State business certificate.      |
| 2. State stenographers diploma. | 4. State stenographers certificate. |

## REQUIREMENTS.

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Advanced bookkeeping.  
Commercial law.  
†Commercial geography.  
Business English.

Business Arithmetic.  
Business practice and office methods.  
†History of Commerce.  
Business writing.

## STATE STENOGRAPHERS DIPLOMA.

To obtain the state stenographers diploma, candidates having the required preliminary education must be certified as having completed a full one year course in a registered business school, or a registered business course of four years in a registered high school, and must pass with honour (80 per cent. and upward) the 100 word test in stenography (academic examination) and the examination in business English and in type writing, including the dictation and work of an amanuensis.

\* Candidates for diploma who take the four year business course in a high school obtain the required preliminary as a part of that course.

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DATES.

1900.	1901.
June 12-15.	January 22-25.

PLACES.

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DAILY PROGRAMME.

	9.15 a.m. 12.15 p.m.	1-15. 4.15 p.m.
<i>Tuesday</i>	Advanced bookkeeping.	Business arithmetic.
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<i>Thursday</i>	Commercial geography.	History of commerce.
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STATE STENOGRAPHERS DIPLOMA AND STATE STENOGRAPHERS CERTIFICATE.

Examinations will be held at the above mentioned places.

DATES.

1900.	1901.
June 14-15	January 24-25.

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ACADEMIC SUBJECTS.

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June 12-14.	June 11, 13.
September 25, 27.	September 24, 26.

## DAILY PROGRAMME (SUBJECT TO CHANGE IN 1901.)

		January.	
		9.15 a.m. 12.15 p.m.	1.15 4.15 p.m.
<i>Tuesday.</i>			Civics. Economics.
<i>Thursday.</i>	U. S. history. Stenography.		
		March.	
<i>Wednesday.</i>			Civics.
<i>Thursday.</i>	U. S. history. Stenography.		
<i>Friday.</i>			Economics.
		June.	
<i>Tuesday.</i>			Civics. Economics.
<i>Thursday.</i>	U. S. history. Stenography.		
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2. Make in good form correct entries of all ordinary transactions, and state clearly the theory in the case of any such entry ;
3. State accurately the particular function of each book used in ordinary business, and show why it is necessary in the business in which it is used ;
4. Show the difference between single and double entry methods, and change any set of books from single to double entry or from double to single entry, and give well defined reasons for each step in the process ;
5. Take up and continue any practicable set of books, in whatever practicable form they may have been kept, whether in mercantile, manufacturing, commission, transportation or banking business, and whether the business be carried on by an individual, a firm, or a corporation ;
6. Make all necessary entries and changes in, and additions to the books of a business when a new partner is admitted, or when its ownership is changed from an individual or a firm to a corporation ;
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3. He may devote to this subject all the time that he can spare from other studies. Where this arrangement is made, there is no excuse for idleness.

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**BUSINESS ARITHMETIC.**—This test requires a high degree of accuracy and skill in business computations, such as weights and measurements arising in different kinds of business (including a practical and thorough knowledge of the metric system of weights and measures), bill making, percentage, interest, partial payments, discount, insurance, commission and brokerage, computations arising out of partnership settlements and the operations of incorporated companies, taxes and duties, averaging accounts, ratio and proportion, accounts current, stocks and bonds, domestic and foreign exchange.

*Suggestions.* To facilitate co-ordination with bookkeeping the work in arithmetic may be divided conveniently into four parts : —

1. The four fundamental rules, United States money, factoring, cancellation, common and decimal fractions and denominate numbers, including the metric system.

2. Percentage, including trade discounts, commission and brokerage, profit and loss, simple and compound interest, bank discount, true discount, partial payments.

3. Insurance, taxes, domestic and foreign exchange, stocks and bonds, partnership and partnership settlements, equation of payments.

4. Ratio and proportion, alligation, general average, corporations, national banks, square root, cube root, and mensuration.

Tests should be given as these parts of the subject are severally completed, and the student's progress in arithmetic should keep pace with that in bookkeeping. Rapid calculation should include the four fundamental rules, cancellation, interest and discount. Mental arithmetic should have a place in all written work, whether formally taught or not.

A brief, practical course in mensuration should be given to all students in school either in classes or as a general exercise.

Equation of payments should be performed by the "interest method" in order to afford additional practice in interest computations and to insure a rational view of the subject.

The work in partnership settlements should be done, as far as possible, on paper properly ruled, and accompanied with trial balances and other necessary statements. This method tends greatly to increase the student's efficiency in the knowledge and practice of accounts.

Select as far as possible business problems, and solve them by business methods. Drill extensively in analysis and reasoning, facility and accuracy of calculation and directness and precision in expressing results, aiming always to correlate arithmetic with business.

As the metric system has been adopted so generally in Europe and South America, students should be able to perform all operations under



that system and to reduce metric to common weights and measures, or common to metric weights and measures with the same facility and accuracy required in work in ordinary denominate numbers.

**COMMERCIAL LAW.**—The test in commercial law demands a knowledge of those matters of law that have constant application in business life, including drawing up in proper form contracts, articles of incorporation and all business documents. Candidates should have a fair practical knowledge of the laws relating to contracts, negotiable paper, liens, guaranty, interest and usury, sale of personal property, warranty, bailment, agency, partnership, joint stock companies and incorporations, insurance, common carriers, attachment and stoppage in transitu, real estate, banking, taxes and duties, distribution of estates after death. They should also be familiar with the statute of frauds and the statute of limitations, and have a general knowledge of the interstate commerce law and the national bankruptcy law, and be able to fill out or draw up in concise legal form any contract or agreement, check, note, bill of exchange, bond, bill of sale, power of attorney, articles of incorporation, bill of lading, deed, mortgage, lease, notice of protest, will or other document relating to the foregoing subjects.

**Suggestions.** Commercial law may be taught advantageously in classes, the instruction being based to a considerable extent on some reliable text-book in the hands of each student. But it should be taught in a live, practical way and closely correlated with the student's work in bookkeeping and in business practice and office methods. When the student in bookkeeping is called on to draw his first check draft or note, he should on that day be instructed in the provisions of law relating to negotiable paper, the duties of the drawer for the protection of himself and others into whose hands the paper might rightfully come, the liability incurred by the indorser and the precautions to be exercised by the payer. All of these will be subjects of lively interest to the student who has just drawn up his first piece of commercial paper, and that paper and the points of law that affect it are likely to be ever after associated together in his memory. When, as a young merchant in the school, he signs a lease for his place of business, the legal bearings of that document should be made known to him as should also those of the fire insurance policy on his goods. As far as possible the document or matter to which the point of law under discussion relates should always be before the class, either written out on the blackboard or in printed form in the hands of every member, and the subject should not be passed over till each student in the class can draw the document and state the important points of law bearing on it. The text-book should be studied outside the recitation room, but not necessarily by consecutive pages. The lesson for any day should be made to fit the work in bookkeeping or business practice and instead of asking for the words or even the substance of the text, the instructor should as far as possible present cases involving the points of law, and require the class to make the application, citing if possible parallel cases. All latitude for discussion consistent with good discipline and necessary time limits should be allowed and every member should participate in it and be encouraged to ask questions on any point not fully understood. Such discussion judiciously held would prove of great value to the class, not only in giving an exact knowledge of the meaning and application of the law, but as tending to promote confidence and clearness in expression of ideas.

**BUSINESS PRACTICE AND OFFICE METHODS.** The test demands a practical general knowledge of the manner and methods of conducting ordinary kinds of business, and a ready familiarity with the methods and practice that should prevail in every well regulated business office. This work is closely correlated with bookkeeping, arithmetic, and commercial law, and gives rise in great part to the work in those branches, as well as to much valuable practice in the use of English and in penmanship. The candidate should know something of the usual rules and practice in buying and selling breadstuffs and other agricultural products, meat products, cotton, wool, hides and other raw materials, lumber, iron and other building materials, oils and naval stores, mineral products sold on a

commercial scale ; stocks and bonds ; fruits and groceries ; dry goods and all ordinary commodities. He should have some general knowledge of the prevalent customs in the business of transportation on the high seas, the great lakes and navigable rivers and by canal or railway ; in the business of banking, insurance and manufacturing ; and should also know something of the more important rules and customs governing transactions on the stock exchange, the produce exchange and similar centres of trade. He should be able to keep the accounts of any ordinary business and to draw up or make out all papers in the regular order of such business. A plain, easy, and above all, legible business handwriting is an indispensable requisite.

*Suggestions.*—In the business practice department the transactions should be so far as circumstances permit, counterparts of those occurring in actual business, and they should be conducted with the earnestness and exactness which characterise the man of business. With this spirit prevailing it will be the pride of the student to carry out with precision the most minute details of business custom and business etiquette. Every student in this department should be required to perform independently and in accordance with the principles and models furnished him the whole series of connected operations arising out of the various species of commercial dealings, after the matter has been thoroughly explained and illustrated by the teacher.

1. The books, stationery, and appliances used in the course should be modern, of good material and of the most approved forms used in the best administered business houses.

2. Sufficient time should be allowed the student in each office or subdivision of the business practice work to gain a knowledge of details. One week in a bank, for instance, is almost useless, as it tends rather to confuse the student than to make plain the principles and practical methods of modern banking. Too much importance cannot be attached to correct practical work in any kind of business that is taken up.

3. Strict accuracy in this department should be insisted on and nothing short of it should be accepted by the teacher. The student should, if necessary, be required to do his work over till it is correct.

4. The student in the business practice department should be taught to guard sacredly all original documents coming into his hands, to file his letters and papers with care and accuracy and to keep everything in and about his office in good order. To this end special instruction should be given in office methods, including handling and care of books and papers, copying and filing, indexing and briefing, duplicating (mimeograph, neo-style, carbon, etc.). The student should also be brought occasionally face to face with emergencies that require prompt action and quick thought, to the end that when thus confronted with actual business life he may possess a cool head and a ready mind.

5. No business practice department can be complete without a fair amount of intercommunication work. The bank cannot transact a business without its correspondent in New York, nor, if an extensive institution, can it afford to dispense with its correspondents in other cities. The commission merchant cannot do business without consignors and consignees in other places. Manufacturing establishments often depend on distant places for their raw material and for a market for their products. Insurance companies must have their agencies scattered far and wide. In many kinds of business more trade is done by correspondence than in the office. This intercommunication work becomes most interesting when it can be carried on by regular course of mail, with other schools located at distant points, and between strangers. There is in this method a flavour of actuality that gives zest to the work ; but if such arrangement cannot be made satisfactorily, a New York, a Chicago, a New Orleans, a Philadelphia, etc., may be established in the school building and all the formalities of correspondence fully observed. These transactions between distant points broaden the student's views of business. He will not consign his

corn to Chicago, his molasses to New Orleans or his pork to Kansas City and the reasons for this will tend to open his eyes to the independence of the different places and different peoples of the earth. He will gain a complete familiarity with invoices, accounts sales, accounts current bills, receipts and every kind of formal business statement: with express receipts, railway receipts and more formal bills of lading: with warehouse receipts, drafts, checks, promissory notes and all ordinary forms of business paper. He should also acquire the ability to write a good business letter. He should be taught to combine clearness with brevity and every letter or other document written should pass under the eye of a careful teacher. Students whose handwriting is deficient in legibility or neatness should receive such individual instruction as may be necessary, and should be required to devote extra time to practice till the deficiency is overcome.

**\*COMMERCIAL GEOGRAPHY.**—The test in geography presupposes some general knowledge of mathematical, physical, and political geography, as preliminary to the more detailed knowledge required. Candidates should be able to give the location, physical features, approximate size and population, form of government and prevailing language of the commercial countries mentioned in the following outline, and have knowledge of the relative commercial importance of those countries and of the principal products, routes of travel and transportation, their chief seaports and the ocean routes by which these are connected with the great trading ports of the world.

The following outline will serve to indicate the ground to be covered in geography:—

*Mathematical.*—Form and size of the earth. Proofs of the earth's shape: rule for finding the curvature for any given distance: circumference: equatorial and axial diameter: approximate area.

Motions of the earth. Axial rotation and its consequences: revolution round the sun and its consequences: distance from sun: size and shape of earth's orbit.

Directions, positions, and measurements. The cardinal points and how they are determined: the mariner's compass: means of recognising the north star: inclination of earth's axis to plane of its orbit and the consequences: principle circles of the earth: globes and maps.

*Physical.*—Land—Continent: islands, continental and oceanic: coast forms, including cape, promontory, peninsula, isthmus: relief forms, including plateau, plain, hill, mountain, mountain range, mountain system, valley basin, divide, desert.

Water.—Divisions, including ocean, sea, gulf, or bay, strait, sound, lake, river, river system, glacier, iceberg: circulation, including waves, tides, ocean currents (equatorial current, gulf stream, Kuro Siwo, Arctic current).

Atmosphere.—Constant winds, including trade winds, anti-trade winds, monsoons. Inconstant or irregular winds, including land and sea breezes, cyclone or tornado, waterspout. Moisture: grains to a cubic foot of air; saturation or dew point: dew, frost, cloud, fog, rain, snow, hail: average annual rainfall.

Climate.—As determined by location, altitude, winds, ocean currents, high mountain ranges.

Weather bureau.—Predictions, signals.

*Political.*—The political divisions of each continent or grand division, with their capitals, forms of government and populations.

\* The outline for the test in this subject and in history of commerce is presented with greater minuteness than others, because these studies are new in most of the schools, and because there are so few textbooks covering the topics. The syllabus is intended, therefore, not only to point out the ground to be traversed, but also to fix the limitations of the test. No questions will be asked concerning any matter not explicitly outlined in the syllabus, and the questions will be along broad lines, rather than on unimportant details.

**Commercial.**—A study of the following countries as to their commercial importance, value of exports and imports, trade with the United States leading products, internal communications (including routes of travel and transportation), prevailing languages, chief commercial cities and seaports and the principal ocean routes by which they are connected with the trading ports of the world. A fair knowledge of these matters will be required in the case of all the countries mentioned in the following list (arranged approximately according to importance of trade with the United States), whether or not they are specifically mentioned under the name of the particular country. A fair general knowledge of the leading commodities which form the bulk of the world's commerce will also be required.

#### THE UNITED STATES, ITS DETACHED TERRITORY AND DEPENDENCIES.

The candidate will not be questioned on this branch of the subject concerning any matters not specified in the following syllabus of the commercial geography of the United States, but he should be able to answer any of the questions indicated under the preceding heads of mathematical, physical or political geography, in so far as they apply to this or any other country mentioned in the following list.

**UNITED STATES.**—*Raw products.*—Cotton (fibre, seed, oil), grain (wheat, maize, rye, oats, barley, rice, buckwheat), animal food (live cattle, dressed meats, preserved meats, pork and lard, dairy products), hay, tobacco, fruits, hops, iron, coal, copper, silver, gold, lead, zinc, sugar, salt, clay, hides, furs and skins, fish, tar, turpentine, lumber, alcohol, states leading in production of these articles.

*Manufactures.*—New York. Clothing, iron and its products, leather and its products, refined sugar, chemicals, steam engines and heavy machinery, agricultural machinery and implements, sewing machines, bicycles, wagons, typewriters and other fine machinery and tools, printing presses and type, paper and books, electric machinery and supplies, pianos, ship-building, soap and candles, clay products, tin and copper goods, malt liquors, tobacco and cigars, furniture, knit goods, hats and caps, gloves.

Pennsylvania.—Importance in iron and steel working, woollen and carpet industries.

Massachusetts.—Leading in cotton mills, boots and shoes.

Illinois, Ohio, New Jersey, Indiana, Wisconsin, Missouri, Michigan, Connecticut, Rhode Island, and their leading manufacturing industries. Recent development of manufacturing in southern states.

*Internal communications.*—Mississippi river system, great lakes, Erie and Oswego canals, Hudson river, Sault Sainte Marie canal, Welland canal, St. Lawrence river, transcontinental railway systems and principal connexions, railway lines running north and south, trunk railways in New England, trunk railways in New York, railways running north and south in New York, postal and telegraph facilities, express companies.

*Seaport Cities and Towns.*—The six leading seaport cities, their position, population, and that for which each is specially noted; five cities on the New England coast, one each on the coast of Virginia, North Carolina, Georgia, Florida, Alabama and Texas, and four on the Pacific Coast, with the trade for which each is noted; seven important city ports on the great lakes: ten important river ports of the Mississippi system: ten inland manufacturing or commercial cities of New York; ten inland manufacturing cities or towns of New England, three of New Jersey, five of Pennsylvania, one of Delaware, and one each of Virginia, West Virginia, Georgia, Alabama, Tennessee, Indiana, Michigan and Wisconsin; six important mining cities and towns in the United States; the largest cattle market town; the chief coal oil town; four noted inland cities and towns of California.

*Ocean communications.*—Routes from New York, Boston, Philadelphia and Baltimore, east, south, south-east and south followed by west; routes from San Francisco west, south-west and coastwise; two types of ocean steamers; other ships; postal facilities; ocean cables.

**DETACHED TERRITORY AND DEPENDENCIES.**—*Alaska.*—Furs, fisheries, minerals, forests.

*Hawaii.*—Commercial value, leading products, chief city, ocean communications.

*Puerto Rico.*—Two leading products, chief seaport.

*Cuba.*—Commercial value, two leading products, internal communications, chief city and seaport, ocean communications.

*Philippine Islands.*—Commercial value : hemp, sugar, tobacco, coffee, chief port : ocean communications.

*Government.*—Commercial policy of the home government regarding late Spanish territory.

### Great Britain and Her Colonies.

*Commercial importance.*—Value of exports and imports, financial centre, manufactures, distributor of the world's produce, merchant marine trade with the United States, free-trade.

**ENGLAND AND WALES.**—Agricultural products : grazing : coal and iron : clay : tin : five leading manufactures : five leading exports : five leading imports from the United States : four navigable rivers : canal mileage : railway mileage : postal and telegraph systems : two leading seaports : three lesser ports : three leading inland manufacturing cities : two other inland manufacturing cities.

**SCOTLAND.**—Coal and iron : granite : ship-building : character of manufactures : internal communications : three leading cities.

**CANADA AND NEWFOUNDLAND.**—Agricultural and grazing products : lumber : coal : tariff : immigration and emigration : railways : merchant marine : naval station : exports and chief city of British Columbia ; of Manitoba : fur products of the Northwest territory : Ontario, its exports and three commercial cities and towns : Quebec, its principal crops, minerals, industries and exports : its great water route and its two important cities : New Brunswick, its lumber trade and chief city : Nova Scotia, its exports and chief city : Newfoundland and its fisheries.

**IRELAND.**—Agricultural and grazing products : three articles manufactured in export quantities : five commercial cities and towns.

**BRITISH INDIA.**—Wheat, cotton, millet, rice, indigo, tea, opium, oilseeds, fruits, spices, perfumes, drugs and dyes : the Indus, Ganges, Bramaputra and Irrawaddy rivers : density of population : principal food of inhabitants : value of exports : commercial rivalry with United States : trade value to United States : four important commercial cities.

**CEYLON.**—Five important products : capital and chief commercial city.

**HONG KONG.**—Rank as a port : a monetary centre : a commercial storehouse.

**THE STRAITS SETTLEMENTS AND ADEN.**—Port of Singapore : harbour of Aden.

**AUSTRALIAN COLONIES.**—Ocean communications. *Victoria.* Chief product : chief city. *New South Wales.* Two leading products : seaport city. *Queensland.* Chief product : chief city. *South Australia.* Export products : commercial city. *Western Australia.* Leading product. *New Zealand.* Leading products : chief cities. *Tasmania.* Chief city.

**BRITISH WEST INDIES.**—*Bahamas.* Products : chief city : climate : transmarine communications. *Windward Group.* Chief export. *Trinidad.* An important export. *Bermudas.* Climate : principal exports. *Barbados.* One great product : disaster to planters : important city and port. *Jamaica and Turk's Island.* Chief city. *Belize* (British Honduras). Products : seaport.



**BRITISH SOUTH AMERICAN COLONIES.** *British Guiana.* Three settlements ; chief product.

**BRITISH POSSESSIONS OR DEPENDENCIES IN AFRICA.**—*Cape Colony.* Chief port ; principal exports. *Natal.* Transmarine and submarine connections. *Mauritius.* Staple products. *Sierra Leone.* Capital city. *Lower Egypt.* Leading export ; two cities ; the Suez Canal.

#### OTHER COUNTRIES.

**GERMAN EMPIRE.**—*Commercial importance.* Value of trade with the United States ; five leading exports and five leading imports ; merchant marine ; ship-building ; bounties ; technical and commercial education.

*Products.*—Potatoes, cereals, sugar beets, flax, hops ; fruit, wines ; lumber ; coal ; iron and steel ; textile fabrics, hosiery and gloves ; porcelain and glass ; chemicals and dyes.

*Internal communications.*—Five navigable rivers ; five important canals ; railway system.

*Cities and towns.*—Berlin ; Hamburg ; Bremen and Bremerhaven ; Düsseldorf and Essen ; Cologne ; Frankfort ; Dresden ; Chemnitz.

**FRANCE.**—*Commercial importance.* Advantageous situation ; value of trade with the United States ; five leading exports to the United States ; four leading imports from the United States ; merchant marine ; ship building ; fisheries ; skill in manufacture of fine goods. *Products.* Wines ; sugar-beets ; cereals ; fruits ; iron and steel ; textile fabrics ; pottery ; leather goods ; millinery.

*Internal communications.* Four navigable rivers ; four important canals railway system.

*Cities and towns.* Paris ; Havre ; Rouen ; Marseilles ; Bordeaux ; Lyons ; Lille.

**BRAZIL.**—*Commercial importance.*—Value of trade with United States ; reciprocity treaty ; five leading exports ; chief export to the United States ; five imports from the United States.

*Products.* Coffee, sugar, cotton, tobacco, india-rubber, hides.

*Seaports and cities.* Rio Janeiro ; Para ; Pernambuco ; Bahia.

*Ocean communications.* Steamship routes ; submarine cable.

**BELGIUM.**—*Commercial importance.* Volume of trade ; density of population.

*Products.* Coal, flax, sugar, cotton and woollen fabrics, iron and steel, glassware, furs and gloves.

*Internal communications.* Two rivers ; canals ; railways.

*Seaports and cities.* Antwerp ; Brussels ; Ghent ; Liège, Mechlin.

**SPAIN AND PORTUGAL.**—Commercial importance ; climate and soil ; irrigation ; character of population ; wine, lead, iron ore, copper, raisins, oranges, cork ; three principal imports from the United States ; internal communications ; three leading cities of Spain and two of Portugal ; ocean communications.

**ITALY.**—Works of art ; silk, wines, wheat, olives, fruits, nuts ; railways, two great tunnels ; old Roman highways ; leading seaport ; one historic city ; two important commercial cities ; the centre of silk manufacture ; one Sicilian port.

**HOLLAND (THE NETHERLANDS).**—Annual value of exports and imports ; merchant marine ; situation and physical features ; methods in agriculture ; butter, cheese, bulbs and seeds ; textile fabrics : canals and navigable rivers ; railways ; great ship-canal : two great seaport cities ; the centre of linen manufacture.



**Colonial possessions.** Dutch East Indies, including Borneo, Sumatra Java, Celebes, Moluccas, western half of New Guinea. Sugar, coffee, tea rice, indigo, chichona ; capital and chief seaport.

**MEXICO.**—Five leading exports ; railways ; other roads ; capital ; principal seaport ; three other seaport towns.

**JAPAN.**—Density of population ; variety of climate ; rice, tea, silk, wheat, coal, iron, copper ; skill in manufacturing ; internal communications ; two important cities ; ocean communications ; progress of the people.

**CHINA.**—Size of the empire ; density of population ; character of the people ; policy of exclusion ; chief products and manufactures ; three leading exports to United States ; two leading imports from United States ; internal communication ; one great city ; two leading Chinese seaports ; increasing importance to United States.

**RUSSIA AND SIBERIA.**—Wheat, flax, linseed, fish, gold, salt, petroleum, other minerals ; leather ; sheet-iron ; internal communications ; annual fairs ; four leading cities ; one Siberian seaport.

**SWITZERLAND.**—Commercial importance ; skilled labour ; cheese ; laces and embroideries ; silk and silk goods ; watches, clocks and carved woods ; international communications ; three leading cities.

**AUSTRIA-HUNGARY.**—Commercial importance ; wheat and maize, rye and oats ; sugar-beets ; iron, coal, salt, gold, silver ; buttons, glass, iron and steel goods ; fabrics of linen, cotton, wool, jute ; distribution of industries ; internal communications ; three important cities ; two seaports ; transmarine communications.

**TURKEY (including the Levant).**—Raisins, cotton, tobacco, attar of roses, carpets and rugs ; wool and woollens, opium, licorice root, figs ; internal communications ; chief city ; two cities of Asia Minor.

**SWEDEN AND NORWAY.**—Timber, dairy products, iron and steel, hides, fish, matches ; chief imports ; internal communications, merchant marine ; two capital cities and seaports.

**DENMARK.**—Live stock, dairy products, hides and skins, barley, iron and steel products, vegetable, chinaware ; internal communications ; chief city and port.

**GREECE.**—Currants, figs, olives.

**CENTRAL AMERICAN STATES.**—Projected ship-canal ; increasing production ; coffee, sugar, hides, rubber, mahogany, bananas, dyestuffs, tobacco ; cities and seaport.

**VENEZUELA.**—Coffee, copper, hides, dyewoods, cocoa, timber ; internal communications ; cities and principal seaport.

**ARGENTINA.**—Wool, cattle, horses, wheat, flax, tallow, preserved meats ; internal communications ; principal city and seaport ; ocean communications.

**COLOMBIA.**—Cinchona, coffee, cocoa, bananas, mahogany and other woods, dyestuffs, tobacco, hides ; internal communication ; seaports, cities and towns ; ocean communications.

**CHILE.**—Copper, silver, wheat, nitrates, guano, hides, coal ; chief imports ; capital city ; two seaports.

**URUGUAY.**—Liebig beef company ; preserved meats, hides, wool, hair ; two navigable rivers ; imports ; chief city and port ; rapid growth.

**ECUADOR.**—Cocoa, rubber, hides, coffee, vegetable ivory, Panama hats, cordage ; internal communications ; chief city ; principal seaport.

**PERU.**—Nitrates, guano, wool of the sheep and alpaca goat, ores ; internal communications ; Lake Titicaca ; irrigation ; chief city and principal seaport.

**BOLIVIA.**—Silver, gold, rubber, cocoa, cinchona, coffee ; internal communications ; chief city.

**HAYTI AND SAN DOMINGO.**—Sugar, logwood, hides, coffee, cocoa ; two principal cities.

### COMMODITIES.

The student should possess a general knowledge of the more important commodities of commerce, the climate and conditions suited to their production, where and how they occur and the preparation necessary to fit them for the purposes of trade.

*Foods.* Beef and beef-products, fish, pork and its products, wheat, maize (Indian corn), rye, barley, rice, oats, fruits, coffee, tea, cocoa, potatoes, sugar, dairy-products.

*Textiles.* Cotton, flax, hemp, jute, silk, wool.

*Metals.* Iron, copper, gold, silver, tin, lead, nickel, zinc, quicksilver, aluminium.

*Minerals* (other than metals). Granite, sandstone, limestone, slate, clay and its products, coal, petroleum, asphalt, precious stones, salt.

*Manufactured products.* Alcohol, buttons, dyes, glass, leather and its products, paper, wines and liquors.

*Unclassified.* Amber, cinchona, cinnamon, copal, dextrin, furs, gum arabic, gutta-percha, hops, india-rubber, ivory, kauri gum, lime chloride, lumber (oak, maple, pine, hemlock, spruce, chestnut, black walnut, cedar, teak, redwood, jarrah, mahogany, ebony, boxwood, rosewood), mastic, opium, pepper, potash, shellac, soda, spices, sulphur, tar, tobacco, tragacanth, turpentine.

*Suggestions.*—Commercial geography may be taught by means of general exercises and lectures, provided copious notes are taken ; but class teaching and the use of a textbook are strongly recommended. It seems desirable to begin with local geography, including home products and home trade, and to proceed outward in widening circles till the study embraces first the state, and then our entire country, and finally all the countries of the commercial world with which we have any considerable trade.

**HISTORY OF COMMERCE.**—In history of commerce the candidate should have a general knowledge regarding the origin and early development of commerce, should be able to trace its influence on the world's civilization, and should have some knowledge of the great discoveries, public works, inventions, legislative enactments and other important influences by which the progress of commerce has been affected. A more intimate acquaintance with the commercial history of our own country will be required.

The student should be led to a clear understanding of the beginnings of commerce as the inevitable outcome of man's needs and desires. He should trace its earlier history and note the causes of its development, with the more striking incidents with which that development has been accompanied. This naturally demands some knowledge of the peoples and of the countries or cities that in earlier times have been noted for commercial enterprise—Egyptians, Chaldeans, Ishmaelites (Arabs), Phœnicians, Assyrians, Persians; India, Carthage, Greece, Rome, Palmyra, Florence, Venice, Constantinople. Among the leading events bearing on the progress of commerce of which the student should have knowledge are : the conquests of Alexander ; the Punic wars, invasion of the Goths, Huns and other northern tribes ; fall of the Roman empire, and later the irruption of the Saracens ; rise and decline of [the feudal system ; depredations of pirates and robber bands ; the crusades ; travels of Marco Polo ; rise of free cities ; institution of fairs, markets, and guilds ; institution of negotiable paper and banks ; invention of the mariner's compass and the astrolabe ; the search for a new route to India ; the era of discovery ; the Portuguese establishment in India ; French and English in India ; rise of the Dutch republic ; early navigation laws of England ; the European system of colonization ; colonization of America ; rise of great seaports on the Atlantic seaboard ; beginning of commercial legislation ; Colbert and the protective system ; slavery in Europe and America ; the treaty of Utrecht ; the industrial revolution ;



for accuracy having been laid, the student should copy from new matter at a given rate, and on acquiring this speed dictation should be given directly to the machine.

Great care should be exercised in selecting matter for copying or for dictation. No such matter should be given simply because it contains words which can be printed on the typewriter or taken in shorthand. The selection should have further and broader purpose. Even business letters intended for dictation should be scrutinized and if necessary revised, that they may be correct models in style and expression; and so far as possible in all other matters chosen for transcription or dictation the teacher should assure himself that it is of a character tending to add to the student's general knowledge and to broaden his mind while it affords him the required practice.

**\* STENOGRAPHY.**—The following are the requirements for the 100 word test in shorthand: ability to take down accurately in shorthand a selection of unfamiliar matter dictated at the rate of 100 words a minute and to transcribe the notes correctly either in longhand or on a typewriter. About five minutes are given to dictation and about 55 minutes to transcription of the notes. The shorthand notes and the transcript are to be collected by the examiner at the close of the period assigned. The papers of candidates will be rated according to the accuracy shown in taking down the selection and in transcribing the notes. For the state business credentials no paper in stenography rated below 90 per cent. will be accepted.

**Suggestions.**—The principles should be thoroughly mastered before any speed work is attempted. Each lesson illustrating a new principal should be copied neatly and accurately several times with pen and ink. As much time should be given to the *reading* as to the writing of shorthand; for proficiency is as essential in reading as in writing, and is obtained by practice only. The student should be required to read fluently, intelligently and with correct expression.

Students writing the same number of words may be grouped in classes, each class receiving dictation for a given length of time and reading back from shorthand notes. Typewritten transcripts for correction should be made daily. Each student should also receive individual instruction. A designated number of pages of shorthand written each day outside of the class should be submitted to the teacher for inspection.

## EXAMINATION PAPER ON BUSINESS ENGLISH.

Answer 10 questions but NO MORE. Answers in excess of the number required will not be considered. Divisions of groups is not allowed. Every letter is to be formally addressed to some person or firm and to be formally signed by the writer. All answers will be rated as to penmanship, spelling, punctuation, capitalization and general neatness, and also as to correct use of words, sentence structure, logical sequence of ideas and paragraphing. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

1. Write a letter for Adams & Co., Buffalo, to Byron Barnes, 12 Bridge st., New York, advising him of consignment of 8,000 bushels of wheat by boat *Fleetwing*, and giving instructions as to sale of the wheat. State quality of wheat, and say that you draw at sight for \$5,000.

2. Order from Economy Hardware Co., Pittsburg, 2 gross union knobs, 3 gross 4 × 4 butts, 2 doz. bronze hinges (C421),  $\frac{1}{2}$  gross coat and hat hooks (B1), 10 kegs 8d and 15 kegs 10d wire nails. Give shipping instructions. Ask more liberal terms. Complain of delay in last shipment.

\* Stenography will continue to be given as an academic subject and candidates for the state business credentials will be admitted to any of the examinations mentioned in the calendar.

3. Write to an intimate friend who is earning a good salary, and has recently married, setting forth the advantages of life assurance. Recommend some particular form of policy, giving reasons.

4. State in a letter to C. N. Dark, Cloudville, Ind., the advantages of your new system of electric lighting. Cover the following points: facilities for electric manufacturing; quality of light; cheapness and enduring character of apparatus; places for which this light is peculiarly adapted; testimonial in pamphlet sent. Offer to furnish estimates by mail, or to send a representative to give full information.

5-6. Draw in proper form articles of agreement covering the following conditions: -

James Shepard owns a vacant store that has rented for \$1,200 a year. David Moore's shoe store has been burned. Most of the stock, costing \$3250, was saved, but part of it was damaged. The two men agree to form a partnership in the shoe business. Shepard puts in rent of store against Moore's expert knowledge, and is to contribute cash capital equal in value to Moore's stock. Value of stock is to be determined by three appraisers, one chosen by each partner, and the third to be selected by the men chosen by the partners. The firm name will be Shepard & Moore. Partners are to have equal interests. Shepard is to take charge of the books and finances and Moore is to manage the practical part of the business, both devoting their entire time to the business.

7. Report, as broker, to a customer, Otto Rich of Albany, the condition of the New York stock market, and give your views as to the near future of the market.

8. Write an urgent letter to Sloman & Co., Debitville, Mich., to accompany monthly statement showing a balance of \$225.40 that is several months overdue. Demand immediate payment. Use courteous but emphatic language.

9. Write the description necessary to form a part of a fire insurance policy covering the household furniture and other effects in the house in which you live. Assume that among the other things are a rented piano and some valuable pictures belonging to friends of the family.

10. You are a wholesale merchant in New York and have confidential relations with Horace Manley, a banker in Columbus, O. Morgan & Westcott, a new firm in Columbus, have asked to open a credit account with you. Write Mr. Manley for such information as you think needed.

11. You are a junior partner in the firm of Lively & Co., retailers in general dry goods, notions and fancy goods. You have just received a new stock comprising some novelties never before shown in your town. Write an advertising notice informing the public of these facts.

12. You visit Duluth and find an opportunity to buy some very desirable real estate on the principal business street at a price that will insure large profit. The agent has agreed to hold it open for you for 36 hours. You want your partner's assent to a joint investment of \$12,000 in this property. His address is J. F. Mills, 30 Broadway, New York. Write a telegram of not more than 10 words that will give him all information needful for the purpose.

13. Write a letter of application in reply to the following advertisement, stating your age, education, experience (if any) and general fitness for the place. State what references you can give.

**WANTED** A bookkeeper to keep the accounts and to assist in the correspondence of a mercantile business. Address, stating qualifications and giving references, *Business' Herald* office.

14. Write a reply to the letter called for in question 10.

15. Write an essay of at least 100 words on the advantages of a thorough business education.

## REGISTRATION OF BUSINESS SCHOOLS.

It will be seen from the foregoing syllabus that one of the requirements for the state business diploma is the completion of a registered business course. This course may be either a year of technical study in a registered business school (after high school graduation or its equivalent), or a part of the four year course in a high school maintaining a regular business course.

### REQUIREMENTS FOR REGISTRATION.

**FULL REGISTRATION.**—The school must have a force of at least six competent teachers giving full time to the work ; must own a business school equipment worth not less than \$5,000, excluding buildings and ordinary fixtures ; and must offer a satisfactory one year course in preparation for the state business diploma.

**PROVISIONAL REGISTRATION.**—Schools lacking the teaching force or equipment required in full registration, but offering a satisfactory course in preparation for the state business diploma, may receive provisional registration, which will make their students eligible to examinations for the state business diploma.

**RESTRICTIONS.**—No school that does not maintain satisfactory educational standards, or that has not the reputation of fair and honest dealing with its students and the public will be granted registration, either full or provisional.

**CERTIFICATES.**—As evidence of registration of a business school or a business course, the University will grant under its seal a certificate of registration which unless cancelled for cause shall continue in force for one year from its date ; but such certificate will be granted only on favourable report after personal inspection of the school by an officer of the University, and hereafter no business school may exercise the powers or privileges conferred by registration unless it holds an uncanceled and unexpired certificate.

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## APPENDIX C.

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### REPORT OF THE COMMITTEE OF THE DEPARTMENT OF BUSINESS EDUCATION OF THE NATIONAL EDUCATIONAL ASSOCIATION ON A COURSE OF STUDY FOR COMMERCIAL [BUSINESS] COLLEGES.\*

#### THE CORRELATION OF STUDIES IN THE COMMERCIAL COURSE.

The term correlation, as used in this report, your committee understands to refer not only to the co-relation of the studies in the commercial course, but also to the relation of the school to the office and to the relation of the training and conduct of the student in the school to the conditions he will meet in the business house in which he is to begin his career as a business man, it being deemed of the utmost importance that the step the student must take between the business school and the business office be made as short and easy as possible.

Much assistance and information have been received by this committee from the commercial school people not of the committee, and, in addition to this, the former reports of the proceedings of this body have been

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\* Reprinted from the Report of the Commissioner of Education (U.S.A.), 1898-99, Vol. 2, p. 2163.



they have won for all of which the members of this committee hereby tender their warmest thanks and express their thanks.

#### CORRELATIONS.

Whatever else may be said of the business college curriculum, there are, perhaps, no other schools that possess a course of study the several branches of which are so unified and correlated.

It is so for the fundamental bookkeeping, which requires a knowledge of arithmetic, in order that the computation necessary in its routine may be performed with accuracy and dispatch.

The bookkeeper who does not know the legal rules governing business transactions and who does not understand the penalties for their violation would certainly be unfit to manage the affairs of a modern business office. Therefore, no one can lay claim to the title of bookkeeper, or, rather, accountant, in the true sense of the word without a reasonably accurate knowledge of commercial law: and thus we have a third element in the course.

Further, bookkeeping as an art depends largely upon good handwriting, and thus the fourth element in the course of study is brought into close connection with the three branches already named.

Again, bookkeeping, as a record of business transactions, is closely allied to business correspondence, and the bookkeeper, as well as the correspondent, requires a knowledge of English, including grammar, spelling, and composition; thus these branches are intimately connected with the other subjects of the course.

Since the introduction of the typewriter into the business house, no one having any considerable amount of correspondence can dispense with its use, and hence shorthand and typewriting have been added to the commercial course.

As the work of the business correspondent and amanuensis requires accuracy and closer discrimination, punctuation assumes the importance of a separate branch of study, and some knowledge, at least, of rhetoric becomes necessary.

To enforce and fix in the student's mind the principles of bookkeeping, and to assist in giving him a knowledge of business methods and customs, a course in business practice has been introduced. This feature of the course, in connection with intercommunication, or trading between colleges in different parts of the country, is an excellent introduction to commercial geography, another branch of study of great importance to the future business man.

Inasmuch as the education of a business man is not complete without the ability to stand before his peers in public and express his views, public speaking becomes a branch of business training of no little importance.

A knowledge of the laws relating to production, distribution, and consumption is necessary to an understanding of the facts of commerce in their true light and to a correct view of their relations to each other. A place for economics must, therefore, be found in the business course.

Whether we regard the principal work of the business college to be the training of young men and women for positions in business houses, thereby opening the avenue of business life to them, or look beyond this work to broader fields of usefulness, we must, through a series of lectures, if not in some more formal manner, strive to teach the elements of business ethics.

Further, it is none the less our duty than that of other schools to prepare young men and women for intelligent citizenship: for this reason the subject of civil government must be given a place in the curriculum of the business school.

Your committee is aware that this outline will appear to many to be too comprehensive. It is not claimed by your committee that these several branches of study shall be considered to be of equal importance: some of them may, and indeed must, be taught incidentally, but they all, none the less, belong to the education of the modern American business man.

## SUGGESTED OUTLINE OF BUSINESS COLLEGE STUDIES.

**Mathematics :**

- (a) Bookkeeping.
- (b) Arithmetic, including rapid calculation.

**Writing :**

- (a) Penmanship.
- (b) Shorthand.
- (c) Typewriting.

**Business :**

- (a) Business practice, including business methods and customs.
- (b) The history of commerce.
- (c) Commercial geography.

**English :**

- (a) Spelling.
- (b) Grammar and punctuation.
- (c) Business correspondence.
- (d) Composition and Rhetoric.
- (e) Public speaking.

**Civics :**

- (a) Commercial law.
- (b) Civil government.
- (c) Economics.

## SUGGESTIONS ON THE OUTLINE.

## TIME REQUIRED.

The time mentioned under each topic in this outline is the probable time required, but it must be borne in mind that in commercial or business schools the qualifications of students vary greatly, and their fitness for business life must be measured by their attainments and not by the time they have spent in school.

The ability or power to do certain things neatly and accurately in a limited time alone decides the student's qualifications, and he should be graduated when he can meet these requirements, regardless of the time he has spent in securing this attainment.

## ELEMENTARY BOOKKEEPING.

Time, three hours (by hours is here meant periods of sixty minutes) daily for two months, exclusive of the time spent on bookkeeping in business and office practice.

As before stated, your committee assumes bookkeeping to constitute the basis of the commercial course. The student should begin the study of bookkeeping only when he writes sufficiently well, and can perform ordinary computations under the fundamental rules of arithmetic, including interest, with a reasonable degree of accuracy. It may be necessary, therefore, for the incoming student to pass through a preparatory course of study before entering upon the course here described.

Bookkeeping should be taught individually. Drills and lectures may be given in classes, but each pupil should pursue the course in bookkeeping independently of other students, except in so far as is necessary to carry out a scheme of practice as hereinbefore mentioned.

This plan of individual study has many advantages :

First. The bright student is not held back by others who are slow, but is allowed to proceed as fast as he can do his work well.

Second. The slow student is not pushed ahead of his ability by those who are more rapid in their work, but is allowed to understandingly master the work as he progresses.

Third. This individual work in bookkeeping renders the course flexible ; the student may devote all the time he can spare from other studies to this subject, and therefore may be always kept busy. Where this arrangement is made no student need be idle at any time, and as book-

keeping is the groundwork of the course of study, it is eminently fitting that it should be thus made the subject of special individual instruction.

Special test exercises in this subject, illustrating various applications of the principles of bookkeeping and fixing, by review, the work the student has already gone over, may be given to advantage throughout the course. In these tests the student should be thrown upon his own resources, and he should satisfy both himself and his teacher as to his ability to work independently of aids of any kind.

Here, as elsewhere, weekly class drills or oral quizzes are recommended as valuable in assisting to fix in the minds of students the principles underlying the subject taught.

#### BUSINESS PRACTICE AND ADVANCED BOOKKEEPING.

Time : Three hours of sixty minutes, daily for six months.

Before entering upon what is usually known as "business practice" pupils should have in some measure the qualifications that they would be required to possess before beginning actual work. These should include order, neatness, good penmanship, etc. In correspondence and business forms they should have a clear idea of the mechanical arrangement of a letter and a knowledge of the forms and uses of checks, notes, drafts, etc., with a fair understanding of the use of the daybook, journal, ledger, cashbook, sales book, and bill book. They should be quick and apt in journalising, and should have at least passed the test in the first division of arithmetic.

Your committee will not undertake to designate what the course in business practice shall or shall not be, but takes the liberty of submitting the following propositions :

First. As the course in business practice is especially designed to correlate the school work with the work of the office, the business transactions in the business practice course should come to the student bookkeeper for record in the same way they come to the bookkeeper in the business house ; and the business done by the student and the transactions made and booked by him, should be done and recorded as nearly as possible as they would be done and recorded in a first-class business house.

Second. The books, stationery, and appliances used in the school should be modern in form, well bound, of good material, well printed or engraved, and in every respect the equal, at least, of those found in use in business houses. Good books and stationery tend to the formation of habits of neatness and accuracy.

Third. A reasonable variety of books should be used, in order that the student may, when going out of the business-practice department of the school, pass into the actual work of the office without feeling that books of account are all fashioned alike, but he should rather go out with a fair degree of knowledge concerning various forms of books of account, especially those that may be considered standard. But, on the other hand, this variety of forms should not be so great as to confuse and annoy the student. Whatever is undertaken should be well done. And here, as elsewhere, one thing done well is better than any number of things poorly or loosely done.

Fourth. The student should remain a sufficient time in each office or subdivision of the business practice work to gain a fair knowledge of the detail of such office or employment. Your committee believes that a week in a bank, for instance, is almost futile, and tends rather to confuse the student than to make plain the principles and modes of modern banking. Not less than a month should be given to the actual work in the bank, and a proportionate time should be spent in the other offices. Nothing should be attempted that can not be done thoroughly and well.

Fifth. From the time assigned to bookkeeping and business practice in this report it will be seen that your committee believes that from two-thirds to three-fourths of the whole time given to bookkeeping in the commercial course should be devoted to this business-practice work.

Sixth. Accuracy in this department should be insisted upon to the letter, and all the "checks" possible should be placed upon the student, that his work may be done thoroughly and accurately. All loose and haphazard work should be rewritten, and neatness and accuracy should be insisted upon. Let all this work be done under an experienced and competent supervisor.

Seventh. The student in the business-practice department should be taught to conscientiously care for all original documents coming into his hands, to file letters and papers with care and accuracy, and to keep everything in and about his office neat, clean, and orderly.

Eighth. The strictest attention should be given to correspondence, and, as the intercommunication work usually connected with this department gives rise to a large amount of correspondence, which, in the nature of things, no other plan can secure, the student should be made to profit by this opportunity to develop his ability to write a good business letter. All work in this line should be performed with care and fidelity, and every letter and document written in this department should pass under the eye of a careful teacher, who should firmly decline to accept anything but reasonably good work.

Ninth. A plain, easy, rapid style of business writing, without shade or flourish, should be taught in this department, and students not meeting a reasonable requirement in handwriting should be debarred from the work in bookkeeping, and should receive special attention in penmanship until such a handwriting is acquired. A constant improvement in the student's handwriting during the whole course should be insisted upon.

Tenth. Special attention should be given in this department to the art of bookkeeping, such as indexing, the arrangement of accounts in the ledger, the proper manner of closing accounts, forwarding, etc.; the handling and care of books, the filing of papers, and every detail connected with office work.

Eleventh. The student should be taught to be exhaustive in the examination of statements and accounts; to check his books when balancing, even though they balance after the first addition; to check all statements received, and to carefully go over a second time all statements rendered. He should be taught to examine and audit books, and should acquire the skill necessary to perform these operations with reasonable dispatch.

Twelfth. The order and discipline in this department should be that of a well-conducted modern office; communication between students should be allowed concerning the business in hand only. Necessary conversation should be carried on only in a low, soft tone of voice, and no unnecessary noise, heavy walking, or irregularities in deportment should be permitted.

#### ARITHMETIC.

Time: Five periods a week for six months.

To facilitate co-ordination with bookkeeping the work in arithmetic may be arranged in four divisions, as follows:

First. The fundamental rules, United States money, factoring, common and decimal fractions, and denominate numbers.

Second. Percentage, with its applications, profit and loss, discounts, commission and brokerage, simple and compound interest, and partial payments.

Third. Insurance, exchange, equation of accounts, and stocks and bonds.

Fourth. Taxes, partnerships, national and savings banks, etc.

Tests or examinations should be given as these parts of the arithmetic are severally completed, and the student's progress in arithmetic should be made to keep pace with his advancement in bookkeeping.

Rapid calculation should include addition, subtraction, multiplication, extension, cancellation, and interest and discount, by short and rapid methods.

"Mental arithmetic," whether formally or incidentally taught, should have a place in all arithmetic work.

A brief practical course in mensuration should be given to all students in the business course, either in classes or as a general exercise.

The metric system, longitude and time, marine and life insurance, foreign exchange, and general average may usually be omitted; not because they are not important, but because other more important subjects demand all the time that can be given to arithmetic in these schools. It is urged by some teachers that the metric system should be taught, but, for the reason given, your committee suggests that it be omitted.

Equation of payments should be performed by the "interest method," in order to afford additional practice in interest computations and to insure a rational view of the subject.

The work in partnership settlements should be performed, as far as possible, on paper ruled by the students in the form of statements, trial balances, etc. This work, done in such manner, tends to greatly increase the student's efficiency in the practice of accounting.

Students' failing to pass the tests in arithmetic may proceed with their work and be given such tests again when time has been afforded them for review or private study, providing, however, that the student shall not be allowed to advance in his bookkeeping beyond the point where such test in arithmetic is required to be passed.

Your committee recommends the analytic method, and the avoidance of formulas of all kinds throughout the whole course in arithmetic. If it be thought best to use a formula, it should be thoroughly explained, that each student may fully understand the process upon which such formula is based. The fact that the arithmetic of business is pre-eminently the arithmetic of common sense should not for a moment be lost sight of in drilling classes in this branch in our schools.

#### PENMANSHIP.

**Time :** Five periods a week throughout the course.

Your committee believes that nothing but plain, practical business writing should be taught in these schools except to those taking a special course in ornamental penmanship (and ornamental penmanship constitutes no part of a commercial course). A student whose writing is below a reasonable standard should be made to discontinue work in bookkeeping until his writing is improved. Figures should receive close attention, and students should be drilled in both their form and their rapid execution. Skill in accommodating writing to the space to be occupied should be carefully cultivated. An easy arm movement should be early acquired. Unnatural and unhealthful positions of the body should be guarded against. Every teacher in the school should give attention to the correction of the writing of students as to position, movement, and form in the branches taught by him, and nothing but the best work of the student should be accepted anywhere. The student should be induced to write to the best of his ability always, and always in a correct position.

No criticism upon the usual methods of teaching this branch is here intended, but it is the opinion of your committee that there is generally too much of oral explanation attempted by teachers of penmanship, an effort to hold the attention of pupils to extended and minute descriptions of form, when the students are not prepared for such explanations. As a rule but a few moments should be devoted to any explanation in this branch until the student has attempted to write the copy. After making such attempt his attention should be again called to the form for a short time, and he should again be allowed to attempt its reproduction. All long and tedious analysis should be avoided. Especially is this true concerning the teaching of those who are beginning the systematic study of penmanship. Persistent practice under careful direction is what is needed to produce good business penmanship.



**COMMERCIAL LAW.**

**Time :** Three periods a week for four months.

It is the sense of your committee that commercial law should be taught as a regular class recitation. The student should be provided with a text-book and be required to prepare his lessons as in other branches. Lectures on law are valuable, but lectures should not be depended upon to the exclusion of regular text-book work. The application of business law to bookkeeping should be most carefully enforced, and the student's knowledge of business law should be carefully correlated with his work in business practice. While the teacher of this branch should be well acquainted not only with the facts in the book he is using, but be well informed in law generally and acquainted with the rules of pleading and practice in the courts, it is by no means necessary that he should be a lawyer. Lawyers are often not teachers, and more often they are not disciplinarians, and when employed to teach commercial law in business colleges they are not likely to give sufficient attention to the order and discipline of their classes. For this reason what is gained in the direction of law is often lost or more than lost in other directions.

The common forms of legal and business documents should be exhibited in the classes as the subject of the lesson deals with them, and it is better to use forms that are now or have been used in the regular course of business. For instance, the policy of insurance, the protested bill, the deed, the mortgage, etc.

An occasional "moot court," judiciously conducted, may be made very useful in illustrating the practical details of lawsuits and the practice of law. Such "moot courts" must, however, be managed with the greatest care to prevent them degenerating into a mere amusement.

**CIVIL GOVERNMENT, INCLUDING CIVICS.**

**Time :** Two periods a week for four months.

These subjects are sometimes taught in our schools incidentally and through lectures, but many schools use a text book and do regular class work in these branches. Your committee recommends that these branches be taught formally, even if they are made elective. No finishing school can afford to assume the business education of young men and women to be complete till they have acquired a reasonable knowledge of the methods by which our government is conducted and have also a fair comprehension of the rights and duties of citizenship.

**ECONOMICS.**

**Time :** Two periods a week for three months.

The subject of economics should find a place in schools devoted to the training of young men and women for business life. However this branch may be taught, its teaching should so impress the student that he will desire to continue reading and thinking on the subject.

**SPELLING.**

**Time :** Three to five periods a week till excused by meeting the requirements.

The following is a very excellent method of teaching spelling :

The pupil studies fifty words from a text-book on spelling ; the teacher pronounces these, and the student writes them in a blank book kept for that purpose. When this is done the misspelt words are checked by the students as they are spelled by the teacher. The words checked are immediately afterwards written correctly by the student on a separate slip of paper. At the opening of the next lesson they are copied from this slip into the back of his blank speller. But whatever method may be used, no student should be graduated from any course in our schools who has not attained a reasonable degree of proficiency in this branch. The passing grade should not be less than 95 per cent. in the shorthand course, and 90 per cent. in the commercial course, but students should not be excused from



spelling until they reach a grade of 95 per cent. All misspelled words in any work the student may do should be marked by the teacher and corrected by the student by rewriting.

#### GRAMMAR.

**Time:** Three periods a week for four months.

Grammar should be taught with a view to the correction of errors in speech and writing. The subtleties of the subject may well be avoided, but much that is usually termed "technical grammar," but which is necessary to the understanding of our language, should be carefully taught and persistently drilled upon. The test of all instruction should be, "Will it aid the student in the construction of the English sentence?" Blunders should not be allowed to pass without correction, either in class recitations, written exercises, or ordinary conversation, and all papers containing inaccuracies in language should be corrected and rewritten. Care must be taken and tact used that the spontaneity of students be not suppressed by this work.

It has been suggested that the student should learn grammar by copying rules, etc., on the typewriter, but while the typewriter is an important aid in the improvement of language, nothing but careful, formal instruction, persistent and regular, can be depended upon to secure good results in the teaching of this subject.

#### BUSINESS CORRESPONDENCE.

**Time:** Two periods a week for four months.

Business correspondence should receive most careful attention:

(1) As to mechanical arrangement. (2) As to style. A text book on this subject should be used, and, in addition to the work of the text book, many letters should be written by the student, criticised by the teacher, and returned to be re-written, if deemed necessary. The letters of the entire class should be read in the class, signatures omitted, and comments and criticisms should be made upon them by the class and the teacher, applying the principles of grammar and rhetoric to their correction where those principles have been violated. Such work affords excellent additional drill in composition and rhetoric, but this work should not be relied on exclusively for instruction in these subjects. A good collection of business letters from good business houses may be profitably used in this work to inspire and encourage students to excellence in letter writing.

#### COMPOSITION.

**Time:** Two periods a week throughout the course.

Composition should receive attention in an incidental way through every paper in school. Not less than twice each week every student in the school should submit to his teacher in this branch a paper in his own language of not less than one page in length of ordinary letter paper. The teacher should correct this paper with reference to grammar, spelling, arrangement, etc., or rather suggest the correction with red ink, and return the paper for the student's examination and correction. If thought necessary, it should be re-written.

As much instruction on various topics must be given in the form of lectures, abstracts of these lectures should be written by the student, and when criticised by the teacher, they form the best means for the composition work mentioned.

#### RHETORIC.

**Time:** Two periods a week throughout the course.

This branch, with few exceptions, must be taught incidentally in our schools, but nevertheless it may be well taught, and that, too, without consuming much time.

#### PUBLIC SPEAKING.

**Time:** One period a week throughout the course.

Students should receive, through lectures and familiar talks, instruction in public speaking and should be required to take part in exercises that

will give them opportunity for practical training. Every student should be required to stand while reciting and to clothe his thoughts in the best language he can command. This alone will aid him greatly in the art of public speaking. It is a very important thing that men and women of affairs should be able to appear to advantage when presenting their business, and public speaking is one of the best means to acquire this ease and grace of manner. Students should be encouraged to form societies for practice in public debating and parliamentary practice, and to take part in them.

#### **BUSINESS METHODS AND CUSTOMS.**

Time : Two lectures a week throughout the course.

In addition to the work done in this line in the practice department, business methods and customs should be taught through lectures and familiar talks. An important feature in connection with this instruction as well as in commercial law, and a very interesting one, is the use of original documents in connection with the subject, such as the freight receipt and bill of lading in shipping, the deposit slip, check and draft in banking, etc. In addition to such methods of giving instruction on these subjects, the various departments of arithmetic and commercial law afford a most excellent opportunity to acquaint students with the methods adopted and employed in the conduct of business.

The history of commerce will occupy a place under this head, as, for the present at least, it must be taught through lectures.

#### **COMMERCIAL GEOGRAPHY.**

Time : Two periods a week for three months.

This branch may be taught through lectures and general exercises, though your committee advises that, where possible, it be taught formally in classes. There is no subject connected with commerce more interesting than this. Just now the acquisition of islands by our Government, the extension of our trade, the competition between our Gulf and Eastern ports, and many other matters of commercial interest are attracting the attention of the business men of the entire country, and the teacher who reads and thinks will not want for material to make this subject attractive.

#### **SHORTHAND COURSE.**

##### **SHORTHAND STUDY.**

Time : Five periods a week for eight months.

Each lesson in shorthand should be thoroughly understood by the pupil before advancing to the next. The principles contained in the lesson should be fixed upon the mind of the student by reading exercises illustrative thereof. Such exercises should be copied by the student with the greatest accuracy a sufficient number of times to enable him to commit not only the matter, but the shorthand characters contained therein to memory. It is suggested that not less than ten times is usually sufficient. The exercises should then be read to the student at an increasing speed until he has reached the limit of his ability to make good notes ; illegible characters should never be allowed under any circumstances. Accuracy and not speed is the great desideratum in early work in shorthand.

##### **READING SHORTHAND NOTES.**

The student should never be permitted to write anything in shorthand which he does not thereafter read ; and should read each exercise often enough to enable him to give fluency and expression to the reading. He should not be permitted to hesitate over his notes, but should translate them at once with good expression and in a clear tone.

##### **SPEED WORK.**

The student should not be allowed to use any new matter, for speed or other work, until the text book has been mastered. But the speed work

outlines under "Shorthand study" should be carried through to the end of the book. The "writing exercises" should be translated into shorthand by the student, and, when they have been corrected by the teacher, should be used the same as the "reading exercises" spoken of under the head last mentioned.

#### DICTATION.

Time : Throughout the course.

The students should be arranged in couples or groups, in each of which the students will have as nearly as possible the same speed ability. A selection should be given to the group, and they should read it around, turn about. When it is read, the reader should call upon the one to the left to read his notes, and at the very first error made the reader should call "next." If the next does not at once respond, "next" should be again called, and so on, until some one corrects the error made by the first one who reads, and proceeds. If no one reads, the reader should correct the error and proceed as before. When the matter has been read back correctly, the one to the left becomes the reader and proceeds as before ; and so on, round and round, until all have the matter by heart, and the notes as well. Then another selection should be given them, and the work should proceed as before.

The matter used in these groups should be engraved matter furnished by the author of the text-book or by the teacher, and before it is used in the groups it should have been copied by each member of the group in the manner outlined under "Shorthand study."

No new matter should be used until each member of a group has reached a speed of at least 150 words per minute upon the copied matter.

Note.—By "new matter" is meant that which the student has not copied and as to which he forms the outlines upon his own responsibility as it is being read to him.

#### SHORTHAND TESTS.

Your committee would recommend the following tests :

First, to write 300 words in three minutes and read it back without a mistake in the same length of time.

Second, to write 300 words in three minutes and make a transcript of the same on the typewriter in thirty minutes.

Third, to write 300 words in three minutes and make a transcript of the same on the typewriter in twenty minutes.

#### TYPEWRITING.

Time : Five periods a week for six months.

The student should complete some good typewriting manual, containing in addition to the usual drill for fingering, etc., all the ordinary business and legal forms in common use, and hand each lesson to the teacher without an error or erasure. After completing the manual from five to ten pages of type-written matter should be handed to the teacher daily for correction. The typewriter manual having been completed and the foundation for accuracy laid, the student should copy from new matter a stated number of words per minute, and upon reaching the required speed, dictation should be given direct to the machine, and letters should be taken in shorthand and transcribed upon the typewriter. He should be required to arrange and tabulate figures in statements and to correct and improve matter from "rough draft" where the matter is poorly arranged and improperly tabulated.

#### TYPEWRITING TESTS.

Your committee would recommend the following tests :

First, to copy from manuscript at the rate of 30 words per minute for three minutes, returning a neat, accurate page, free from erasures or letters struck over each other.

Second, to copy manuscript at the rate of 35 words per minute for three minutes.

Third, to write from dictation at the rate of 45 words per minute for three minutes.

**COLLATERAL BRANCHES.**

Penmanship, spelling, grammar and punctuation, composition and rhetoric, and rapid calculations, as recommended for the student of the commercial course, with equal proficiency therein, are absolutely necessary for the graduate of the shorthand course. Especially should all the branches necessary to give the student a good understanding of the English language receive the closest attention in all cases where such student is not well qualified in English before entering on the study of shorthand. In the latter case, such students should pass the test in grammar before being excused from the study of this branch.

**BOOKKEEPING.**

At least such a knowledge of bookkeeping as will enable the student to act as assistant bookkeeper is recommended to be required of all taking this course.

**OTHER TESTS.**

In addition to the tests in shorthand and typewriting, students should be required before graduating to pass examinations in grammar and punctuation with grades of not less than 85 per cent., and to correctly spell at least 95 reasonably difficult common words out of a possible 100. Daily drills in penmanship and rapid calculation should be given from the time the student enters until he leaves the school.

**GENERAL REMARKS.**

**ARRANGEMENT OF CLASSES, TIME, TERMS, ETC., OF SCHOOL.**

As most commercial schools in this country continue in session throughout the entire year, admit students at any time, and teach bookkeeping, at least individually, but little can be profitably said in this report concerning the above-named subjects. These matters must be left to the management of the individual schools as their needs seem apparent.

**PROGRAMMES.**

It must not be forgotten that (unlike the public schools, where students usually enter at the beginning of a term and continue throughout the course) in commercial schools students are coming and going constantly; some for a month's instruction only, others for two, many for three, and some for a full course. It would seem, therefore, useless to give in this report any outlines even of programmes, arrangement of studies, or order of classes, further than to say that all work should be done by schedule and all classes called and dismissed regularly and promptly.

**LIBRARIES, MAGAZINES, ETC.**

It is pertinent to suggest that all schools should contain libraries for the use of students, and the commercial school is no exception to the rule. Students, in addition to the use of the library, should be urged to subscribe for and read some of the best periodicals published on the subjects they are studying.

**A MORE COMPLETE REPORT.**

It is confidently hoped that ere long a more complete and more advanced course of study than this now submitted will be required for the use of the commercial schools of America, and if this elementary effort shall afford any help in that direction it will amply recompense this committee for the labour expended.

Respectfully submitted

J. M. MEHAN.

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public schools did not do ; but, because very many of them were of a low grade, attracting pupils of poor mental attainments and scholastic ability, and because the instructors employed were of limited education, the prominent educators of the country have ignored the private business schools of high grade, and, until recently, have believed that all these schools were wrong from a pedagogical point of view. There is no question in my mind as to the value of the work which the better business colleges have been doing. The commercial high school aims to do many things that the business colleges do not try to do. But, in order properly to fill its place in the community and justify its existence as a school supported by public taxation, the commercial high school must teach those things which the best business colleges taught, in a manner equally thorough and practical. Not long ago, in an educational paper of some standing, I noticed that the business college was merely a clerk factory to turn out business assistants, but that the aim of the high school was to turn out business-men. I suppose the writer should have said, to carry out his thought, successful business-men. This statement, with some variation, has been repeated frequently and has been made a great deal of. But to me it is an expression without definite meaning. What is a business-man ? Is he a wholesale or retail merchant ? A banker ? An exporter ? A railroad manager ? A manufacturer ? A clerk ? A bookkeeper ? A commercial traveller ? It seems to me that anyone who is engaged in any occupation arising from the exchange of commodities is essentially a business-man, and if he succeeds he is a successful business-man. The successful business man owes his success sometimes to his education, but more often to his tact and special knowledge of the business in which he is engaged. All that the commercial high school can do for its pupils is to teach them to use the tools of business, in order that the natural gifts in a business way which they all possess in some measure may be developed and their value increased. A competent business man, as such, cannot be made, in a school. Many men who have the best instruction possible do not succeed in business because so many things besides education are necessary to insure success. Business ability is frequently inherited. Some families—nay, some races—seem to be endowed with the commercial instinct.

What is a commercial education ? I well know a successful bank president and financier who cannot keep a simple set of books ; a prominent business-man of my acquaintance received all the business training he ever had as a journalist ; another, in the classical course of a university ; another received a liberal high-school course ; another, an elementary-school education ; and another—a most successful business-man—had no school education at all. There were successful business-men in former generations ; there are splendid business-men to-day who never had the special training the commercial high-school course proposes to give, though some of them have had the advantages of a business-college course. It seems to me, therefore, that any education which a business-man has, and which makes him a better businessman, is for him a business education, no matter whether it was obtained in the walls of a school or not.

Now, it seems to me there is nothing mysterious in this question, and there has been no great discovery lately as to what constitutes a business education. We are merely beginning to realise its value and necessity to-day, and the great danger of failure in our commercial courses lies in our desire to do so much for our pupils that we over-estimate the value of some parts of the courses we would offer, and by endeavouring to accomplish too much fail to provide a sensible, practical, and workable curriculum. Our laudable desire to have a great school should not obscure the need of having a good school.

Without entering into specifications, I may say I am convinced that some of the commercial courses adopted by our boards of education the past three or four years have already been adjudged failures, so far as accomplishing the purpose for which they were organised is concerned. A business education such as our secondary schools should give is not nearly so technical as many are wont to imagine, and, in my estimation, it is that kind of education which develops and strengthens the mental faculties which are



used in business, and which provide that general knowledge which is useful in all business, and, in some cases, the particular kind of knowledge useful in a particular business.

I have no sympathy with those who sneer at schools which only attempt to turn out good clerks, and good bookkeepers, and good stenographers, for now-a-days every young man must begin in a subordinate place, oftentimes being obliged to accept the first opportunity offered; and unless he is competent to do well that which he is first given to do, he is handicapped at the start. I have had this deeply impressed upon my mind after each semi-annual graduation of the school in which I have the honour to serve. I have charge of what may be called our employment bureau: for our school is so well known that we have frequently more calls for office help than we are able to fill, and I cannot fail to notice the disappointment which many show at being obliged to begin in places of slight responsibility.

The grammar-school course, in cities at all events, is defective in thoroughness in many particulars; and some of its weak points should be points of strength in business education. There is a vast number in every city who, because of their circumstances, cannot spend four years, or even three, in a secondary school. It seems to me, therefore, that the first duty of the public commercial high school is to extend the work of the elementary school where needed, to strengthen it wherever it is weak, and to provide that which will be of value to those who can stay but a short time in the course. Its second duty is to take care of the needs of those who can stay a somewhat longer time; while it should last provide for those who will take the last years.

I do not believe that it is the function of the public secondary school to teach the philosophy of business management, nor do I believe it is within its power to do so. The course of study of a public commercial high school must be exceedingly strong in those subjects which the 99 per cent. of those who attend will require (the essentials), and, if possible, strong in those branches which will be wanted by the 1 per cent. who are expected to become bank presidents, railroad managers, consuls, promoters of vast enterprises, and the like.

The studies of the course may be grouped as follows: English; mathematics; science; languages; history and civics; commercial subjects taught separately as such, including writing, bookkeeping, arithmetic, commercial law, stenography, and typewriting.

The study to which I assign the first place in the commercial high school course is English, by which I mean the "art of expression" in conversation and writing, and on one's feet in public. Just here the work of the elementary school may be supplemented with the utmost advantage to the pupil, for spelling must be taught regularly and systematically. The work of composition should begin at once, with a view of teaching a boy to arrange his ideas logically, and to state them as concisely as is consistent with clearness. The development of a literary style may be left until the third or fourth year of the course. Letter writing must be taught as a part of the curriculum, and I would devote one hour a week for the first two years to this most important subject, giving constant attention to form, punctuation, spelling, subject-matter, and the acquirement of a good business style. The handwriting of many of the incoming pupils will be so poor that penmanship, *i.e.*, rapid and legible writing, must be taught as a special study to most of the pupils for one year at least, and legibility and neatness in all written exercises must be insisted upon by every teacher, and nothing else accepted. The book-keeping of the first year should be simple, but thorough; the most careful attention being given to the form and use of all the business papers which would naturally be handled if the transaction used as the basis of instruction was genuine. The principles underlying the science must be dwelt upon with painstaking insistence, and presented again and again in ways which may tax the ingenuity of the instructor, until they are thoroughly understood, and can be applied correctly and without hesitation. At the end of the first year the pupil should be able to open, conduct, and close intelligently an ordinary set of books requiring a knowledge of the

use of the day-book, journal, cash-book, sales-book, and ledger. He must also be able to make a clear statement of the condition of the business as shown by his ledger. The work of the second year should be developed in a natural way from that of the first, the examples increasing in difficulty, the pupil being compelled to rely upon himself as he becomes able. It should be accompanied with a thorough course in business practice and office routine. In the third and fourth years the more difficult and intricate work of the bookkeeper should be undertaken, and the duties of the accountant and auditor may be studied. The study of commercial arithmetic should be taken up in earnest the first year. And here again the work of the grammar school must be reviewed and augmented by drill in fractions and daily practice in addition. The work in arithmetic, in my mind, should consist to a great extent in the mental solutions of examples, with a view to acquiring that facility and accuracy which is demanded in business. (Cf. pp. 336, 337 below.) The man of affairs meets with but few problems such as the arithmetic offers—that is to say, in the stated form in which the pupil finds them in the text-book. But he is constantly confronted with conditions which demand on his part an ability to apply such principles and rules of arithmetic as will fit the case. This should be borne in mind continually by the instructor, and the work laid out so as to conform to it. The proper use of the text-book is to supply some of the material for home work, and to save the teacher of large classes from the danger of being swamped in preparing and solving and correcting problems. After the first year the work in bookkeeping and business practice will provide opportunities for frequent drill in commercial arithmetic.

Commercial law should be entered upon, not with a view to teaching what is implied by the title of the book, *Every Man his Own Lawyer*, but to give the pupil such a general knowledge of the principles which underlie the laws of business as every intelligent business-man should have. The intensive study of business law may be left to the third or fourth year, but certain divisions of the subject—as, for example, contracts, negotiable paper, agency, partnership, and agreements for personal services—should form an important part of the work of the second year. The application of the laws of commercial paper should be one of the duties of every teacher whose subject, either in theory or in practice, involves the use of any piece of business paper. No pupil who has completed the second year should be unable to interpret the meaning and scope of any indorsement.

Typewriting is practically a necessity to-day for all who enter upon a business career, whether phonography is used in connection with it or not; and I would suggest that in the third year of the course sufficient time be given to it to insure a fair degree of speed. As a means of fixing deeply in the mind of the pupil the correct spelling of words, the proper use of the marks of punctuation, and the mechanical form of letters, I know of no exercise equal to practice upon the typewriter.

Phonography, or shorthand is, to my mind, a study entitled to prominent recognition, not only because of its utility, but also because of the mental discipline which it gives in cultivating and strengthening the powers of attention, observation and discrimination. I suggest its introduction into the course of study in the second year, and at the end of that year I believe the pupil should have acquired a complete mastery of the principles and the word-signs of the system, and be ready to apply them without hesitation. He should be able also to take from dictation easy new matter quite readily. The distinction between a mere writer of shorthand and a competent stenographer should be kept before the pupil, and those who intend to begin their business career as stenographers should be constantly reminded of the need for acquiring general culture as well as the ability to perform the mechanical work of the amanuensis. The work of the second year in stenography should be mainly dictation upon various lines, with a view to acquiring speed. The notes of the pupil should be transcribed by him upon the typewriter as soon he has acquired sufficient proficiency to manipulate the instrument. The work in dictation may be profitably varied by the pupils making their notes directly on the machine.

Freehand and mechanical drawing should be taught in the first two years.

With the exception of English, the work which I have outlined thus far may be completed by the end of the third year. It will afford an excellent education in the so-called business subjects, and the pupil who has pursued it faithfully, under the guidance of properly qualified instructors, will have a good equipment with which to begin his business life.

I will now refer to the other work of the course briefly, not because I consider it unimportant, but because I feel assured that most makers of commercial high school courses will give it all the preferment to which it is entitled.

The course in history and civics should include general history, with American history and government as a part of the work of the second year: the history of commerce is appropriate for the work of the third year: while economics, political science, and modern and industrial history may constitute the work of the fourth year.

The course in mathematics should comprise arithmetic, algebra, and geometry in the first, second, and third years, respectively.

In science, physical geography, and physiology and hygiene should be studied the first year: commercial geography and physics, the second year: chemistry and natural science, the third year: industrial chemistry, and the study of raw materials and manufactured goods, the fourth year.

From the department of languages I would omit all but the modern tongues, and they should be pursued not so much for their literary and culture value as for their possible practical utility. The value of the work in this department will depend very largely upon the ability of the teacher and his comprehension of the objects to be attained. I would suggest that an option between Spanish and German be permitted on entering the course, and that a choice between science and a second language be allowed in the second year, and possibly a choice between science and French in the third year. In the third and fourth years in which any language is pursued a part of the work of the pupils should be in business correspondence in that language.

Limitation of time now imposes upon me the necessity of bringing these suggestions to an end, though I feel that I have only touched upon the essentials and possibilities of my subject. In conclusion, permit me to say that I believe our most urgent need is not so much new and remodeled commercial courses as new and remodelled commercial teachers.

What is needed in each of our great cities is a thoroughly American commercial high school, based on American needs, and adapted to American ideas. Not that I would fail to recognise the splendid results secured in the European schools of commerce, or cast to the winds the fruit of their experience in commercial courses. Far from it. With due appreciation of what they have accomplished, let us make a practical use of what is adapted for our particular needs, and, benefitting by the study of these illustrious models, build up in this country schools in every way their equal, and, so far as our needs are concerned, their superior.

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## APPENDIX E.

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### THE TEACHING OF ARITHMETIC IN AMERICAN SCHOOLS.\*

#### I.—ANALYSIS OF TWO ARTICLES BY GENERAL FRANCIS A. WALKER.

In General Francis A. Walker's "Discussions on Education," posthumously published in 1899, the Editor, Mr. James Phinney Munroe, reprints two addresses on the teaching of Arithmetic, "Arithmetic in the Primary and Grammar Schools" and "Arithmetic in the Boston Schools," which cover

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\* See also pp. 319, 329, and for advanced work, pp. 303-4.

practically the same ground. It is proposed to summarise here the contents of these two articles.

In 1887 the School Board of Boston, "largely because of President Walker's vigorous efforts" (*loc. cit.* p. 209), passed the following "Orders concerning the study of arithmetic :—

(1) Home lessons in arithmetic should be given out only in exceptional cases.

(2) The mensuration of the trapezoid and of the trapezium, of the prism, pyramid, cone, and sphere; compound interest, cube root and its applications; equation of payments, exchange, similar surfaces, metric system, compound proportion, and compound partnership, should not be included in the required course.

(3) All exercises in fractions, commission, discount, and proportion should be confined to small numbers, and to simple subjects and processes, the main purpose throughout being to secure thoroughness, accuracy, and a reasonable degree of facility in plain, ordinary ciphering.\*

(4) In "practical problems," and in examples illustrative of arithmetical principles, all exercises are to be avoided in which a fairly intelligent and attentive child of the age concerned would find any considerable difficulty in making the statement which is preliminary to the performance of the proper arithmetical operations.

When arithmetical work is put into the form of practical or illustrative problems, it must be for the purpose of interesting and aiding the child in the performance of the arithmetical operations, and with a view to their common utility.

(5) In oral arithmetic no racing should be permitted; but the dictation should be of moderate rapidity.

(6) The average time devoted to arithmetic throughout the primary and grammar school course should be three and a half hours a week; and in the third primary grade, not more than two hours, and in the first and second primary grades not more than three and a half hours each per week (*loc. cit.* pp. 235-6).

The amount of time spent on arithmetic in the Boston schools previously had been as follows :—

			Class.	Approximate Age.	Hours Weekly.
Primary School	-	-	3	6	3½
"	-	-	2	7	4
"	-	-	1	8	4½
Grammar School	-	-	6	9	4½
"	-	-	5	10	4½
"	-	-	4	11	5
"	-	-	3	12	5
"	-	-	2	13	4½
"	-	-	1	14	4

The two articles by General Walker explain at length the grounds on which these rules were adopted.

For the exclusion of home-work in arithmetic four reasons are given; (1) that too much time altogether was being allotted to the subject, (2) that the results obtained were not better in schools where home-work was given out; (3) that the work produced special injustice from the competitive point of view, in the case of pupils whose homes were noisy, and in which therefore the peculiar degree of abstraction required for the subject was difficult to attain; (4) that children tended to prolong their work when they met with difficulties, long after a point of nervous exhaustion had been reached, which would lead a master at once to put a stop to it. Arithmetic should then, according to General Walker, be taught

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\* General Walker objects to exercises on such fractions as  $\frac{1}{2}\frac{1}{3}$  or  $\frac{1}{3}\frac{2}{3}$ , "hardly ever . . . found in actual business operations" (*loc. cit.* p. 218), and to difficult compound and complex fractions.

entirely in school, and with a two-fold object, (1) to give the pupil the ability to perform simple numerical operations with reasonable rapidity and with almost infallible accuracy, and (2) to give general mental training (*loc. cit.* p. 242). Rules (2) to (5) above were designed with these objects in view.

The standard of practical attainment that General Walker regarded as necessary he sets forth as follows :—

1st. The ability to count infallibly objects occurring irregularly, up to two or three hundred, say, for example, packages of tickets or checks, dots upon a piece of paper, persons in a small audience room, etc.

2nd. The ability to add, without the possibility of a mistake, columns of figures such as would occur in an ordinary savings-bank deposit book or housekeeper's pass book.

3rd. The ability to add two numbers, each below a hundred, or to subtract the less from the greater rapidly and without recourse to pen or pencil.

4th. The ability to multiply, on the slate or blackboard, one number of moderate length by a small multiplier, or to divide it by a small divisor.

5th. The ability to compute simple interest, on moderate sums, at even rates per cent. for round periods.

6th. The ability to work simple examples in "reduction," involving the use of the American tables of weights, measures, and moneys.

"If every boy and girl," he says, "on leaving the grammar school, at fourteen or fifteen, had reached this stage of attainment, the public schools would have fairly done their duty by them so far as the practical uses of arithmetic are concerned" (*loc. cit.* p. 243).

The evidence with regard to the inaccuracy in the use of figures resulting from the methods of teaching arithmetic in American schools till then in vogue (1887) was "overwhelming in character and amount." The pupils, entering the high schools at fourteen or fifteen and leaving them at eighteen or nineteen, were "unable to add or multiply, subtract, divide, or even count with accuracy, and employers who took boys and girls straight from the grammar schools complained bitterly of these deficiencies in their arithmetical instruction" (*loc. cit.* p. 220). "It is difficult," says General Walker, "to imagine a greater wrong, short of permanent injury to health, that can be done to a child, than to send him into the world to earn his living without the ability to conduct numerical operations accurately and with reasonable facility. *Employers have literally no use for boys who make mistakes in number. Such a failing offsets the best training otherwise of mind and hand.\** In a store or shop or factory, or on a railroad, a lad who cannot set down figures and add them right every time is little better than a cripple" (*loc. cit.*, p. 221 ; *cf.* also p. 248).

The defect General Walker regarded as due "not to a lack of time devoted to exercises under the name of arithmetic, but to the fact that so little proper numerical work is involved in these exercises. Scarcely has the pupil learned the four simple rules before he is given numerous technical applications requiring the use of extended tables of weights, measures, and moneys, and so-called practical or illustrative problems which necessitate deep and long puzzling over the relations and terms involved. Even in the early stages of this process seldom as much as one half of the time is given to proper numerical work. Often that proportion sinks to a third, a quarter, or even to a smaller share. Sometimes the amount of such work becomes inconsiderable. Who of us has not seen a bright lad spend ten or fifteen minutes over a practical problem, when the mere addition, subtraction, multiplication, and division involved would not have occupied as many seconds?" (pp. 248, 249). "In scarcely any branch of study is it possible to absolutely waste so much time as in arithmetic. . . . Almost

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\* The italics are not used in the original, but the point is emphasised by repetition.



any amount of time and nervous force may be made a dead loss if the logical puzzles presented to the pupils, under the name of practical problems, are above the pupils' comprehension. After the child has read over the problem again and again, without understanding it, without seeing the principle and processes involved, and has made one or two hopeless efforts towards its solution, it does him no good whatever to keep on worrying over it." (*loc. cit.*, note p. 223.)

It was considerations of this kind that led the Boston School Board to dispense with the subjects mentioned in Order (2) above (p. 331), and they also served, together with other considerations, as the justification for Orders (3) and (4) above (*loc. cit.* p. 249.)

In dealing with the value of arithmetic as a means of mental training General Walker quotes with approval Sir William Hamilton's opinion that the study of mathematics serves in education only to correct the habit of mental distraction and to form the opposed habit of continuous attention. "This," said Hamilton, "is the single benefit to which the study of mathematics can justly pretend in the cultivation of the mind." (Quoted *loc. cit.* p. 214.)

Starting from this basis, General Walker asserts that in modern curricula (devised since Hamilton's time) there are many other subjects which "may serve to create the habit of continuous attention as well as, or even better than, mathematics," while they serve other purposes, educating the powers of observation and generalisation, and affording excellent practice of reasoning in general.\* "Certainly the attention given by a class of interested children in the study of natural history, under a good teacher, is far closer and much more truly educative than the attention given by pupils who are driven reluctantly through an arid waste of mathematics" (*loc. cit.* p. 214 ; see also p. 245).

General Walker concludes that too much time had been devoted hitherto to the subject. He asserts that the exercises given were exercises in logic rather than in arithmetic, and exercises so hard as to cause overstrain and confusion in the brains of the pupils. He "challenges peremptorily the whole policy of giving out exercises of any degree of logical difficulty" to children up to the age of 14 or 15, and quotes the replies, in support of this view, of certain distinguished psychologists and authorities on education, Professor William James of Harvard, Professor George H. Howison of the University of California, Professor G. Stanley Hall of Johns Hopkins, and President Noah Porter of Yale, to questions which he had addressed to them on this point. The purport of these communications, he says, "was to enquire, first, whether the faculty of logical analysis is not one which, in the case of the vast majority of children, normally develops at a later period than that within our present consideration ; secondly, whether, if this be so, there is any pedagogical advantage in attempting to 'pry up' this faculty and bring it prematurely into consciousness and exercise instead of devoting the time and strength of young pupils to the formation of a habit of observation, to the cultivation of the powers of perception, to practice in the interpretation of personally observed phenomena, to the acquisition of elementary information, and to the development, in a reasonable degree, of strength and clearness in the memory" (*loc. cit.* p. 227)

The views of a man of the eminence and experience of General Walker command attention. Whether they will all command assent in this country is another matter. But arithmetic forms so essential an element in commercial education that American experience in this subject cannot be watched too carefully by our teachers.

The following article by Mr. Stitt written some years after the addresses by General Walker, and with a special view to commercial education, practically carries into detail the broad views which have been summarised above.

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\* "The introduction of many new subjects of study," he adds elsewhere (p. 245), "has greatly reduced the importance of arithmetic as a means of general training."



II.—SCHOOL AND BUSINESS ARITHMETIC. LIMITATIONS AND IMPROVEMENTS, By EDWARD W. STITT, PRINCIPAL OF PUBLIC SCHOOL, No. 89, NEW YORK.

ADDRESSES AND PROCEEDINGS OF THE NATIONAL EDUCATIONAL ASSOCIATION, 1900, p. 506.

In common with most teachers who have endeavoured to carry out onerous and over-burdened courses of study, we rejoice that the modern movement has been toward the elimination of much of the old-fashioned arithmetic which formerly wasted so many hours with such little practical results. The days of mathematical puzzles, arithmetical conundrums, and various forms of useless number mysteries have to a large degree disappeared. May they never again hold in their thralldom those teachers who, like Prometheus, were bound to the rock of arithmetical slavery! Many teachers have been the victims of a relentless Pandora, who came, not with a box of evils from Jupiter, but with a long drawn-out course of study, which included too many topics in arithmetic, absolutely unnecessary for the average business man. Alligation, duodecimals, equation of payments, compound interest, foreign exchange, and other such subjects, have either been wholly eliminated or at least very materially reduced in importance.

It is, however, a matter of the greatest surprise that in so many of the important cities of our country the course of arithmetic still holds firmly in its grasp many of the kinds of problems which modern pedagogic leaders have denounced as being unnecessary to young students. I have made a careful study of the arithmetic requirements of thirty of the largest cities in this country, including most of those having a population of over one hundred thousand. The assigned work was carefully examined, and I discovered that in many cases the requirements were excessive. More is demanded than is necessary for proper business preparation, and yet the pupil who desires to continue in the high school or college is not imbued with the proper mathematical spirit by this additional work.

Most careful teachers will probably admit that below the high school the following subjects are unnecessary: partial payments, compound partnerships, equation of payments, compound proportion, true discount, and higher mensuration. The following table will show the relative percentage of cities in which the above subjects are not simply optional, but actually required:

Compound partnership	- 53 per cent.	Higher mensuration	- 40 per cent.
Partial payments	- 47 per cent.	True discount	- 33 per cent.
Compound proportion	- 43 per cent.	Equation of payments	- 30 per cent.

When the percentage of what may be called nonessential subjects varies from 53 to 30, a radical change would be beneficial if it should lead to minimum requirements more nearly in accord with the demands of the times.

When it is remembered that there are over a million persons actually engaged in business in this country, and that nearly half our total population over the age of ten years are busy in some mercantile pursuit, it will be admitted that careful attention should be paid to the requirements which business occupations demand, and that proper minimum standards should be decided upon after careful deliberation. Statistics prove that out of every hundred children who start in life only four reach the high school, two the college, while ninety four leave at various ages to go into some form of business. Urgent efforts should therefore be made to properly equip this largest class with both the amount and the kind of arithmetic needed.

There will probably be considerable discussion as to what may be proper minimum requirements, but careful consideration of the previously mentioned courses of study leads me to the following conclusions:—

1. All unnecessary work, such as partnership with time, equation of accounts, cube root, etc., should have no place in the course of study of any elementary school.

2. Importance of drill and review must be constantly emphasized, not only for the pupil who is to enter business, but also for the pupil who is taught arithmetic as a basis for further mathematical knowledge.

3. The mass of the pupils, however, must have only practical work, as they need their arithmetic, not for mathematical development, but as a means of earning their livelihood.

4. Simple cases under denominate numbers of the practical tables, and easy applications of percentage and proportion, will doubtless include the most advanced work which any fair minimum course will require.

5. Text-books are to be used with caution. They can be made helpful or harmful, according to their use or abuse.

6. Up to the fourth year the main efforts should be to secure rapidity and accuracy of result, and the work should be confined to the fundamental rules and a brief course in fractions. (No fraction should be of a higher denominator than 12, and no examples should be given in 7'ths or 11'ths.) This plan will allow the child to become very familiar with the twenty-eight different fractions, from  $\frac{1}{2}$  to  $\frac{1}{12}$ .

A relief from the present excessive requirements in arithmetic leading to an effort to prepare for proper business equipment is found in the establishment of commercial high schools, the latest development of the school system, and an innovation which most of the large cities of our country have hastened to adopt. The trend toward the movement is also shown in the business colleges, which have been so very successful in preparing young men for a mercantile career that they have an established place in the educational system of our nation.

In these schools the pupils are of an advanced age, and their apprehending power is sufficiently developed to enable them to grasp such subjects as the metric system, compound partnership, equation of accounts, and so forth, which were formerly allowed to harass many a poor boy in the elementary schools, who would never make use of any such branches of arithmetic in the course of his whole life. By the time the average pupil has reached his fourteenth year he is probably finishing the seventh year of school, and is about to complete the final term of his grammar-school work, preparatory to entrance to a high school, or to commence a business career.

In the course of the past few years I have frequently received letters of inquiry from the parents of my pupils, stating that the methods which their children were using were so different from those employed by themselves that they could render them no efficient help. I therefore determined to discover to what extent business practices varied from those ordinarily employed in school, and also to what degree our curriculum might be reduced by limiting the instruction to those subjects which the business-men found most necessary.

I therefore addressed letters of inquiry covering the above points to the heads of the representative business houses in New York. The plan received the hearty approval of a number of our merchant princes, bank presidents, and commissioners of the board of education, including John Wanamaker, R. H. Macey & Co., President Miles M. O'Brien of the board of education, Hon. Joseph J. Little, Commissioner Joseph J. Kittle, president of the Nineteenth Ward Bank, and Superintendent John Jasper. Their cordial indorsement and the use of their names stamped my investigation as being, not simply theoretical, but eminently practical.

So that I might be assisted in making proper generalisations from the replies, and also that I might succeed in reaching a larger number of various lines of industry, I made the following classification of occupations :—

- |                         |                             |
|-------------------------|-----------------------------|
| 1. Wholesale merchants. | 6. Professions.             |
| 2. Retail merchants.    | 7. Importers and Exporters. |
| 3. Manufacturers.       | 8. Agents.                  |
| 4. Trades.              | 9. Miscellaneous.           |
| 5. Skilled artisans.    |                             |

Each of the above classes included about seven sub-divisions, so as to embrace about sixty different business interests. The letters were sent by mail in the number of six hundred stamped envelopes being enclosed for replies. Another set was distributed personally through the efforts of the teachers and winners of my school, and also through the kindness of friends. Additional value was given to the experiment by appreciative words published in the *New York Times Commercial Advertiser*, *Dry Goods Review*, and other papers, thereby bringing the matter to the favorable notice of many people. Replies were received from many sources, and the great majority of the fifty-seven different lines of business was represented in the responses.

In 14 per cent. of the replies the writers stated that there was absolutely no need for any arithmetic beyond the fundamental rules and common and decimal fractions. The great desiderata were accuracy and speed, and strong emphasis was laid on the fact that the pupils should fully understand the importance and logical sequence of every step of the processes involved.

I have classified the information received from the answers under either of two heads: I. "Mechanical Aids"; II. "Processes of Solution."

Under the first head may be summarised the following particulars:

1. Importance of decimal points.
2. Necessity for legible figures.
3. Accuracy and speed.
4. Use of interest and discount tables and graded schedules.
5. Use of cash registers and arithmometers.
6. The frequency with which aliquot parts are employed shows that such fractions as  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ , etc., are seldom used in business, and should therefore receive scant attention in school.
7. Importance of "short-cuts."
8. Value of teaching the multiplication table through  $30 \times 30$ .
9. Importance of familiarity with English money.

10. Business forms, such as cheques, notes, receipts, statements, and price-lists, should be understood by all pupils of the seventh year and upward.

11. Constant repetition and drill in the use of the four fundamental rules.

Under the second heading ("Processes of Solution") I endeavoured to determine the differences existing between the schoolroom practice and that of the outside world. I was surprised at the general agreement between the two. In many cases the writers frankly acknowledged there was no difference in method. In others there were radical differences, and, while some of the replies received have not yet been fully analysed, I believe I have summarised below the chief features of importance.

1. Interest on all sums for any periods of time less than two hundred days should be given by what is called the "bank method," in which the principal is multiplied by the number of days, the decimal point removed three places, and the product divided by six. Many business-men, however, prefer the "sixty-day" method, by which 1 per cent. of the principal equals the interest for sixty days at 6 per cent.

2. In many lines of business the arithmetic seems to be of a kind that to a large degree is specialized, and does not admit of ready reproduction for class work. The problems received were often very technical, and presented such difficulties that it seems hopeless to expect adequate use of the same in school. The most we can hope to do is to properly prepare the pupils for this higher work by impressing upon them the importance of a thorough knowledge of fractions, and also leading them to attain the power to "think in percentage."

3. Retail merchants in all branches of trade seem to agree that all the

arithmetic a boy needs is the practical ability to handle quickly and correctly the four fundamental rules.

4. Wholesale merchants and most of the manufacturers are of the opinion that the ability to calculate interest accurately and quickly, and to handle trade discounts to advantage, constitutes the necessary equipment, outside of the fundamental rules. All agree that the time spent in what is called the "problems in interest," finding the rate, principal, time, etc., is wasted. Almost all the business use of interest is in what is called in most text-books the "first case," namely, to find the interest or amount.

5. Mechanics seem to have very few methods except those which are now usually taught in most of our good schools. The greater amount of all jobbing is calculated approximately, as the mechanic has figured so often in his special line on certain classes of work that he reaches the results almost intuitively. It would seem wise, therefore, to greatly enlarge the plan and scope of approximation in our school work, and in many of our problems we should insist that prior to the complete solution the child shall be required to roughly figure the approximate result. It is only in the larger contracts that mechanics do real figuring. In small jobs they rely on their experience to strike the price about right, or else, if they have miscalculated, they make it up on the next one.

6. The answers received from the plasterers, painters, paperhangers, etc., were somewhat difficult of generalisation, and in a paper of this limit their full significance cannot be indicated. In the main there was harmony with our best school methods, but in many cases technical solutions were sent to me which would be of considerable value in business, but would not be desirable as part of our regular school instruction.

Probably the greatest drawback to successful work in arithmetic at the present time in our elementary schools is the inaccuracy of the children's work. The pupils are too often satisfied if their method of interpreting the problem is correct. They forget that accuracy of result is really the basic principle of this science of quantity, and if there be an error in calculation, the value of the exercise is largely vitiated.

Nothing is more discouraging to a class teacher than, after having carefully and inductively led up to a new process, and by drawing satisfactorily upon the pupil's former knowledge, to have gradually brought him to a comprehension of the new, when she proceeds to make a test to determine results, to discover that a large proportion of the class have glaring errors in calculation. One of the principal reasons for the want of accuracy is the lack of drill in the fundamental rules. I fear that in some respects the overcrowded curriculum furnishes the reason for the want of thoroughness in the mechanical equipment. In the Middle Ages arithmetic was made the first of the "quadrivium" in the course of work followed, and in what we call the modern "trivium" of "the three R's" arithmetic has generally been put last. I do not desire to urge a better place for this subject, though I think that the large number of branches taught in most schools to-day largely prevents proper attention to this very important subject. We sometimes seem to be getting away from the proper twofold function of arithmetic, namely, that it should not only serve as a preparation for business equipment, but also as an educational factor of great importance in mental discipline. The elementary schools to-day are putting too much of the proper training in arithmetic upon the business schools and colleges, and upon the commercial departments of our high schools. The reduction in the requirements for which I have argued should produce as a corollary increased accuracy.

Many merchants strongly urge the importance of mental arithmetic as a factor of business success. From the mere artisan, who calculates the area of a roof to find the cost of tinning or painting the same, to the wealthy Wall Street broker who handles Manhattan "L" stock or government bonds, watches the changes on the ticker from 114 $\frac{5}{8}$  to 113 $\frac{7}{8}$ , and calculates at once the amount of the necessary margin, there is at all times and in all lines of business a necessity for rapid and accurate mental arithmetic. I deem it a conservative estimate that perhaps 60 per cent. of

the arithmetic of the business world is done without pen or pencil. A subject which demands such an important place in the world's experience requires an equally prominent place in the school. I am, therefore, strongly of the opinion that at least half of our school arithmetic should be mental and oral, not only because of the additional training it gives, but also from the fact that so many more problems can be covered in a limited time. At all events, oral work must precede written work, and be the apperceptive basis upon which we build. My experience as a teacher and principal leads me to believe that when mental arithmetic has been neglected by a teacher there is a corresponding loss in the mathematical ability of the class.

Careful inquiry among a large number of teachers and a tabulation of results of many tests in my own school lead me to state that 50 per cent. of the incorrect results are directly traceable to errors in the fundamental rules. So glaring has this weakness become that from time to time I have felt compelled, in order to bring pupils to a full realisation of the value of accuracy, to mark examples correct or incorrect, on the basis of the answer alone, without giving any credit for correct method and an incorrect result. By repeated warnings and punishments of the above nature I am beginning to get in the higher grades the proper co-ordination of method and accuracy.

I think very many of our courses of study in arithmetic may fairly be objected to because of the lack of variety in the planning of the work. In many of the cities the subject of common fractions is finished even to the most complex relations before decimals are taken up. In others, denominate numbers are taught for a full term, and the poor children have *ad nauseum* all the practical applications of weights and measures. Possibly the next term percentage may be the centre of attention. It is far better to carry on several topics at once, and therefore, after the preliminary stages of fractions, both common and decimal fractions should be taught co-ordinately. Very soon percentage should also be taught as a parallel subject, for the scholar should be led to see that all these processes are really similar. Not only will pleasurable variety result, but what is more important, if the scholar is compelled to leave school at an early age, he may have acquired the fundamental nature of a large part of arithmetic. If the above method is followed, each process should be approached in such a way that the child need only grasp the main outlines, the more important details being reserved for higher grades.

Perhaps another mistake, very commonly made, is for the teacher to assist the pupils to too great an extent. They are not to be constantly taught by what has been called the "pouring-in process." Occasionally the teacher should rest and give the children a chance to assimilate the instruction. Frequent reviews, therefore, become necessary. For some reason, however, a teacher always endeavours to finish the grade requirements in arithmetic, even though the science, geography, history, and language lessons suffer in the effort. Perhaps superintendents and principals themselves are at fault in too often making an inspection of the class in arithmetic alone, and allowing that to be taken as a standard for the other subjects. The teachers are, therefore, often in the habit of cramming their boys to pass the arithmetic examination, and the higher result, the logical training of the mind, suffers in proportion.

Let us hope that the dawn of the coming century may witness a new renaissance in arithmetic, and that, with better methods, more intelligent teaching, and courses of study more fully adapted to the children's future, there may be a wonderful improvement in the results, so that time may be saved for other branches, and yet this very important department of school work may justly do all that is demanded of it, first in the practical duties of life, and, secondly, as the natural forerunner of higher mathematics.

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# APPENDIX F.

## THE BOYS' HIGH SCHOOL, BROOKLYN, 1896. (See also p. 257.) COURSES OF STUDY.

YEAR.	CLASSICAL.		LIBERAL.		SCIENTIFIC.		COMMERCIAL.	
	PERIODS.		PERIODS.		PERIODS.		PERIODS.	
							1st Term.	2d Term.
1	Latin	.	Latin or Ger.	.	Latin or Ger.	.	German	.
	English	.	English	.	English	.	English—(Bra. Forms)	.
	Hist.,—Eng. & Mod. Eur.	.	Hist.—Eng. & Mod. Eur.	.	Hist.—Eng. & Mod. Eur.	.	B.-keeping	.
	Natural Sci.—Phya. Geo. & Physiol.	4	Natural Sci.—Phya. Geo. & Physiol.	4	Natural Sci.—Phya. Geo. & Physiol.	4	Penmanship	.
	Algebra	4	Algebra	4	Algebra	4	Phonog. or Alg.	.
	Drawing	2	Drawing	2	Drawing	2	Arithmetic	.
							Physiology and Hygiene	.
							Drawing	2
2	Latin	.	Latin or Ger.	.	Latin or Ger.	.	German	.
	Greek or Ger.	.	Ger. or French.	.	Ger. or French	.	English	.
	English	.	English	.	English	.	Physics, 1st term; Chem., 2d	.
	American Hist.	2	American Hist.	2	American Hist.	.	Am. Hist. & Civics	.
	Biology	3	Biology	3	Physics	.	Phonog. or Com. Geo.	.
	Algebra and Geom.	4	Algebra and Geom.	4	Algebra and Geom.	.	B.-keeping	.
	Drawing	2	Drawing	2	Drawing	.	Com. Law	.
							Penmanship	.
							Arith. & Mensuration	.
							Typewriting	.
							Drawing	2
3	Latin	.	Latin or Ger.	.	Latin or Ger.	.		.
	Greek or Ger.	.	Ger. or French	.	Ger. or French	.		.
	French or Ger.	.	English	.	English	.		.
	English	.	Am. Hist. & Civics	.	Chemistry	.		.
	Am. Hist. & Civics	2	Physics	3	Natural Sci.	.		.
	Physics	3	Nat. Sci., or B.-keep. & Com. Arith.	3	Geom., Pl. & Solid	.		.
	Geom., Pl. & Solid	3	Geom., Pl. & Solid	3	Drawing	.		.
4	Latin	.	Latin or Ger. or Econ. & Com. Law	4	Latin or Ger.	.		.
	Greek or Ger.	.	Ger. or French	3	Ger. or French	.		.
	French or Ger.	.	English	3	English	.		.
	English	.	Greek & Roman Hist.	3	Greek & Roman Hist.	.		.
	Greek and Roman Hist.	2	Chemistry	3	Chemistry	.		.
	Chemistry or Adv. Physics	3	Geol. & Astron.	3	Ad. Physics	.		.
	Trig. & Ad. Alg. or Review of Math.	3	Trig. & Ad. Alg. or Review of Math.	3	Trig. & Ad. Alg.	.		.
					Drawing	.		2

In addition to the above, there shall be—(1) In every course, throughout the four years, one period a week for music. (2) In the Classical and Liberal Courses during the third and fourth years, an option of two periods of drawing per week. (3) In chemistry and physics during the third and fourth years, two additional periods per week for laboratory work. (4) During the third and fourth years, individual instruction in composition and declamation. A period shall be forty-five minutes. A foreign language, ancient or modern, must be pursued for two consecutive years.



## APPENDIX G

1901-1902

THE BROOKLYN EVENING HIGH SCHOOL, No. 1.

HELD IN GRAMMAR SCHOOL No. 15.

Commencing Monday Evening, Oct. 7, 1901, and continuing for a term  
of 20 weeks.

New Pupils admitted on Monday Evenings during the Term.

Sessions—Monday, Tuesday, Wednesday, Thursday, and Friday Evenings

## COMMITTEE ON EVENING HIGH SCHOOL

John J. Colgan, M.D., *Chairman*.

## INSTRUCTORS.

James J. McCabe, *Principal*.Harold E. Buttrick, *Rhetoric and English Literature*.\*Alfred MacKay, *Chemistry and Physics*.\*W. B. Powell, *Mechanical Drawing*.Hugh D. McLellan, *History and Civics*.Lyndon P. Smith, *Architectural Drawing*.Allen B. Doggett, *Free-hand Drawing*.Charles T. Brace, *Algebra and Geometry*.Henry S. Waldron, *Phonography*.Thomas Curtiss, *Phonography*.Marc F. Vallette, *Spanish*.Fred W. Grube, *German*.Paul C. Martin, *French*.W. S. S. Newton, *Grammar and Composition*.William E. Doggett, *Commercial Law and Book-keeping*.John J. Kirby, *Arithmetic*.Maurice J. Thompson, *Arithmetic*.Frank L. Bickmore, *Book-keeping*.J. Marion Souers, *Book-keeping*.Arthur Ralph Kip, *Book-keeping*.*Penmanship and Business Forms*.Hobart H. Todd, *Typewriting*.G. H. Cruikshank, *Principal's Assistant*.

\* These classes in Manual Training High School.

1901-1902.

## PROGRAMME OF STUDIES.

## BROOKLYN EVENING HIGH SCHOOL No. 1.

Underline or Check the Studies you wish.

[Retain and preserve this Programme]

NAMES OF INSTRUCTORS.	STUDIES.	
	7.30 to 8.30.	8.30 to 9.30.
A. B. Doggett - -	Free-hand Drawing -	Free-hand Drawing.
Hobart H. Todd - -	Typewriting - -	Typewriting.
J. M. Souers - -	Book-keeping - -	Book-keeping.
L. P. Smith§ - -	Architectural Drawing	Architectural Drawing.
H. E. Buttrick - -	Rhetoric, English Lit.	Rhetoric, English Lit.
W. S. S. Newton - -	Grammar and Comp. <sup>2</sup>	Grammar and Comp. <sup>1</sup>
A. R. Kip - -	Book-keeping - -	Book-keeping.
F. W. Grube - -	German <sup>2</sup> - -	German. <sup>1</sup>
J. J. Kirby - -	Arithmetic <sup>1</sup> - -	Arithmetic. <sup>2</sup>
M. J. Thompson - -	Arithmetic <sup>2</sup> - -	Arithmetic. <sup>1</sup>
T. Curtis - -	Phonography - -	Phonography.
Wm. E. Doggett - -	Book-keeping <sup>1</sup> - -	Book-keeping. <sup>2</sup>
F. L. Bickmore - -	Book-keeping <sup>2</sup> - -	Book-keeping. <sup>1</sup>
G. C. Raynor - -	Penmanship - -	Penmanship.
M. F. Vallette - -	Spanish <sup>1</sup> - -	Spanish. <sup>2</sup>
P. C. Martin - -	French <sup>1</sup> - -	French. <sup>2</sup>
H. S. Waldron - -	Phonography - -	Phonography.
H. D. McLellan - -	History and Civics -	History and Civics.
C. T. Brace - -	Algebra - -	Geometry.
Principal - -		
Reception Room - -	Registry - -	
Alfred MacKay† - -	Physics - -	Chemistry.
W. B. Powell§ - -	Mechanical Drawing -	Mechanical Drawing.

† The classes in Physics and Chemistry and Mechanical Drawing will meet in Manual Training High School, Court and Livingston Streets.

§ Pupils will provide their own drawing instruments; or they will be supplied by the instructor at cost.

NOTE.—No. 1 in the foregoing denotes *advanced classes*, 2 *second classes*, etc.

JAMES J. McCABE, *Principal*.

## ADMISSION AND COURSE OF STUDY.

1. The requirements for admission to this school shall be at least equal to those prescribed for entering the second Grammar Grade of a day school.

2. Applicants will select what studies (not more than two) they propose to take, and no change, except for the most urgent reasons, will be made after they have been assigned to classes.

3. Applicants will be examined for admission and classification, unless presenting satisfactory credentials.

4. The examinations will be made during the week of registry, and so far as necessary, the first week of the term.

5. It is important that all pupils should be registered before the day of opening, October 7th.

6. A two-year graded course has been prepared in each subject except in phonography, and the satisfactory completion of any one subject will entitle a student to a certificate in that study: but no diploma will be granted if the attendance of the pupil has fallen below an assigned per cent.

7. Examinations upon the subjects of the year will be held during the closing week.

8. Any pupil absent three times without a satisfactory excuse forfeits his position in the school. Pupil absent for sufficient time and wishing to retain same position, should report to the principal or to their instructor either in person or by writing, before their absence has been noticed.

9. For admission to the class in phonography, the pupils must be thoroughly familiar with the elements of grammar, with such facility in writing long-hand as to enable them to transcribe their notes into good English neatly written: and for algebra must have a thoroughness of the principles of common arithmetic and skill in the operation.

10. Applications not accepted for phonography or algebra may be received for some other study, such as grammar or arithmetic.

## APPENDIX B

### THE DREXEL INSTITUTE PHILADELPHIA:

The Drexel Institute of art, science and industry at Philadelphia was founded and endowed by Anthony J. Drexel of that city. It included from the beginning in the scope of its instruction courses in commerce and finance. At the same time well endowed and independent of State control, one may see from an examination of its work in this department a type, and indeed a very good type, of the best work which such institutions can do in the field of commercial education.

The department of commerce and finance consists of three special departments. First, the course in commerce and finance: second, the office course: third, the evening course.

The circular of the institution states that the department of commerce and finance is founded on a broad and liberal basis. In its general features it resembles the commercial schools of Europe, and is intended to place commercial education in its proper relation to other departments of educational work. The object of the course is to train the young men to do business rather than simply to record business. It has been organized with a view of meeting these conditions. It provides a liberal and at the same time thoroughly practical course of study, including two years' training in the knowledge of the world's industries and markets, the law of trade and finance, and the mechanisms and customs of business.

The first special department is intended to give young men and young women thorough fundamental training for the activities of business, which include (1) the production, manufacture, sale, and transportation of articles of commerce: (2) the management of stock companies and corporations; (3) the buying and selling of securities: (4) the importing and exporting of merchandise: (5) the borrowing and lending of money and credit; (6) the advertising of commercial concerns: (7) the keeping of business records.

\* From *Monographs on Education in the United States*, edited by Prof. N. M. Butler. Commercial Education, by Prof. Edmund J. James, pp. 26-28.

The work of this course is divided into two years, as follows :—

**FIRST YEAR—FIRST TERM.**

*Language.*—Composition ; letter writing. American classics.

*Commercial Arithmetic.*—Weights and measures ; trade standards and prices ; wages and pay-rolls ; commercial interest and discount ; speed practice.

*Business Customs.*—Invoices ; commercial paper ; bills of lading and manifests ; vouchers.

*Bookkeeping.*—Principles and practice of double-entry ; simple transactions ; business forms.

*Penmanship.*—Typewriting. Correspondence.

*Commercial Geography.*—The earth's surface in its relation to trade and commerce. Commercial geography of the United States.

*Civics.*—Civil government of the United States.

Spanish and German throughout the two years.

**SECOND TERM.**

*Language.*—Grammatical principles ; diction. Selected classics.

*Industrial Arithmetic.*—Measurements ; builders' and contractors' bids and estimates ; scientific measurements ; manufacturers' and mechanics' estimates.

*Business Customs.*—Securities ; collections ; discounts.

*Bookkeeping.*—Principles and practice of double-entry in more complicated transactions. Shipments, consignments and business forms.

*Commercial Calculations.*—Practical exercises for acquiring rapidity and accuracy of work

*Commercial Geography.*—Natural resources of the chief countries of Europe and the United States in their relation to commercial exchanges.

*Civics.*—History, principle and organisation of political parties ; civil service reform ; ballot systems ; municipal government.

*Typewriting, Correspondence.*

*Physical Training* in the gymnasium ; twice a week throughout the year

**SECOND YEAR—FIRST TERM.**

*Language.*—Rhetorical principles ; essay-writing ; English classics.

*Advanced Bookkeeping.*—Introducing order-book, cash-book, sales-book, bill-book, etc. ; each student is required to keep the entire accounts, for a limited time, of a dozen business concerns, representing the leading industrial and commercial corporations.

*Banking and Finance.*—Outlines of the history of banking and of the national banking system, state banks, saving banks and trust companies.

*Commercial Calculations.*—Practical exercises for acquiring rapidity and accuracy of work.

*Commercial Geography.*—A comparative study of the commerce and industry of the five great commercial nations of the world.

*History of Commerce.*—Outlines of the history of ancient, mediæval and modern commerce.

*Typewriting.*—Business forms.

*Public Speaking.*—One hour a week.

**SECOND TERM.**

*Language.*—Historical outlines of English and American literature.

*Advanced Bookkeeping.*—Continued.

*Commercial Calculations.*—Continued.

*Banking and Finance.*—Bank management and practice.

*Mechanism of Commerce.*—Boards of trade ; stock and produce exchanges ; transportation ; inter-state commerce ; warehousing ; importing and exporting ; duties ; exchange ; mercantile agencies.

*Commercial Law.*—Elementary principles of contracts, partnerships, stock companies and commercial paper.

*Business Printing and Advertising.*—Type and paper ; printers' estimates ; proof-reading ; business cards, circulars and catalogues. Modern advertising, including mediums, rates, agencies.

*Public Speaking.*—One hour a week.

*Physical Training* in the gymnasium, twice a week throughout the year.

Students have also the privilege of attending the special courses of lectures in the chemistry of foods and the chemistry of dyeing and cleansing.

During the second year visits are made to some of the leading industrial and commercial establishments of Philadelphia.

*Diploma.*—The diploma of the institute is granted to students who complete the work of the course in commerce and finance, and pass the prescribed examinations.

*Office Courses.*—In addition to the general course in commerce and finance, described above, and requiring two years for its completion, three distinct office courses are offered. These are thoroughly practical in character, and are designed to prepare young men and young women for entering immediately upon the respective lines of employment to which the training leads.

*Bookkeeping Course.*—The object of this course is to prepare young men and young women for positions as bookkeepers. It occupies one year and includes the following subjects : Bookkeeping, business forms and customs typewriting, commercial arithmetic, English and penmanship. The entire course is directed to training in the most approved methods of keeping business records. All the labour-saving devices and checking and recording systems of modern mercantile establishments are thoroughly taught.

The course occupies one year, divided into two terms.

*Stenography Course.*—The aim of this course is to train young men and young women for positions as stenographers and typewriter operators. It occupies one year and includes the following subjects : Stenography, typewriting, English, business forms and office practice. There is a growing demand among business and professional men for stenographers who can not only take down and typewrite correspondence, but who have a serviceable knowledge of good English, and who are intelligently trained along general educational lines.

The course occupies one year, divided into two terms.

*Private Secretary's Course.*—This course has been organised in response to applications that have been made to the institute for clerks fitted to do work of a different character from that required in a purely business office. The subjects included in the course are as follows : Stenography,

typewriting, penmanship, English, correspondence, accounts, office practice and business printing. Applicants for admission must show by examination, or otherwise, that they are prepared to meet the requirements of the course.

The course occupies one year, divided into two terms.

*Certificates.*—Certificates are granted to students who complete any one of the office courses and pass the prescribed examinations.

*Gymnasium.*—The gymnasium is a large, airy room, completely equipped in accordance with the requirements of the Swedish system of physical training and with dressing-rooms, and bath-rooms supplied with hot and cold water. All the training is conducted under the immediate supervision of the directors.

*Commercial Museum.*—A beginning was made in 1895 towards the formation of a permanent commercial museum, and a large collection of raw and manufactured products has already been secured. This collection represents quite fully the following industrial products: Flour, wool, petroleum, teas and coffees, sugar, cotton, copper, iron and steel, glass, tobacco, leather, rubber, paper, wood, carpet, linen, spices, aluminium, building-stone, brick and terra-cotta. Additions are being made constantly, and the student who is looking forward to devoting his life to trade, shipping, or manufacturing, has opportunity, in connection with his academic work, to make a special study, from both a geographic and an economic standpoint, of the particular industry in which he is interested.

*Art Museum.*—The art museum contains extensive collections representing the industrial arts of Egypt, India, China, Japan and Europe.

*Library.*—The library, which contains twenty-five thousand volumes, is supplied with books, periodicals and pamphlets bearing upon the work of the department, and every facility and assistance is afforded for the study of financial, economic and commercial questions.

*Admission.*—Applicants for admission to any of the courses must pass satisfactory examinations in English, geography, arithmetic and United States history. For admission to the course in commerce and finance, or to any of the office courses, candidates must be at least sixteen years of age. The diploma of high schools of approved standing is accepted in place of an examination. Application for admission should be made to the registrar, at the institute, between 9 a.m. and 4 p.m., or by letter.

*Fees and Terms.*—Course in commerce and finance, *twenty-five dollars* per term.

Office courses, *twenty-five dollars* per term, each.

Students provide their own text-books and stationery.

Coat-lockers, with individual combination locks, are provided for the men students, giving to each the absolute control of his own property. Each student is charged *fifty cents* per term for a locker.

There are two terms in the year, beginning in September and February respectively. Five days' attendance a week is required, from 9 a.m. until 2 p.m.

*Evening Classes.*—The department of evening classes is fully organised, and includes the following courses:—

1. Beginners' course in bookkeeping and arithmetic.
2. Accountants' commercial course.
3. Office course in stenography and typewriting.

Fee for each of the courses, for the entire season of six months, *five dollars*.

It will be seen that the pupils who enter the longer course or any of the office courses must be at least sixteen years of age and must have passed examinations indicating that they have completed the ordinary work of



the elementary school, such as the average boy who has been in school from his sixth year could have completed by the time he was fourteen.

The desire of the management, however, is plainly that they shall have done considerably more work, including, if possible, the first year or two of the high school. As a matter of fact, the average age of the persons who enter upon this course is that of graduation from the ordinary three years high school course of smaller towns and villages.

## APPENDIX I.

### COMMERCIAL COURSES IN PUBLIC COLLEGES (OF THE SECOND RANK, *see* p. 261).\*

#### UNIVERSITIES AND COLLEGES HAVING STUDENTS IN COMMERCIAL OR BUSINESS COURSES IN 1897-98.

Of the 172 colleges shown in Table 5†, all are private institutions except 11. Of the 11, two are supported wholly by the States in which they are located, the remaining 9 being agricultural and mechanical colleges supported by funds from the General Government, supplemented in some instances by State funds. The 11 public institutions offering commercial courses or providing for certain commercial studies are mentioned below.

*University of the State of Missouri.*—The 1897-98 catalogue states that instruction is given in correspondence, making out bills and statements, writing receipts, checks, notes, and drafts, together with the use of various account books. An important part of the work is a thorough drill in journalizing, concluding with the writing of entire sets of books, that the student may make a practical application of his previous work in the various business forms. This work is required in both semesters of the first year. A full course in stenography is provided for those students who wish to carry on this study while prosecuting regular work in the university.

*West Virginia University.*—In 1895 the commercial school of this university was established. It provides a two-year commercial course. To be admitted to this school the applicant must be proficient in arithmetic, English, spelling, geography, and United States history. Certificates are granted to students who complete the course and pass the required examinations. The course of study is arranged as follows:

*First year* — English grammar, physical geography, general history, penmanship, typewriting, arithmetic, United States history, bookkeeping, algebra, civil government, business practice.

*Second year.*—History and principles of commerce, commercial arithmetic, shorthand, commercial law, principles of economics, court reporting, rhetoric, commercial law, commercial geography.

*Colorado State Agricultural College.*—The State board of agriculture in December, 1895, instructed the college faculty to "so arrange the curriculum as to make adequate provision for a distinct department to be known as the commercial course of the State Agricultural College." In accordance with this action the following course of study, covering two years, is offered:

\* Reprinted from the Report of the Commissioner of Education (U.S.A.) for 1897-98, Vol. 2, p. 2444.

† Not reprinted here.

*First year.*—General history, plane geometry, bookkeeping, commercial arithmetic and rapid calculation, spelling, penmanship, rhetoric and rhetorical analysis, solid geometry, business practice and banking, business correspondence.

*Second year.*—Literature, Constitution of the United States, stenography, business geography, logic, sociology, business law, political economy, typewriting and office practice.

*University of South Dakota.*—The College of Business is one of the departments of the institution. The course of study extends over one academic year and "includes bookkeeping in all its forms, both single and double entry, with instruction in the retail and jobbing trade, importing, commission, banking, and other classes of business; penmanship, business arithmetic, commercial law, embracing instruction in the principles of contracts, agencies, partnerships, negotiable paper, and other legal phases of business; commercial correspondence, shorthand, typewriting, and office practice."

*South Dakota Agricultural College.*—One of the departments of this institution is known as the department of commercial science. The commercial studies may be taken in connection with any of the college courses. If taken alone these special studies would occupy about one year. These studies include shorthand, penmanship, commercial law, bookkeeping, business practice, correspondence, typewriting, and commercial arithmetic.

*Florida Agricultural College.*—The business course in this institution may be completed in one year. It includes bookkeeping, business correspondence, commercial arithmetic, commercial law, English, and penmanship. Another course in stenography, typewriting, and telegraphy covers about a year.

*Nevada State University.*—The University Commercial School belonging to the department of secondary education of the State University offers a course of study extending over three years and including arithmetic, algebra, English grammar, English history, literature, penmanship, United States history, bookkeeping, stenography, plane geometry, typewriting, rhetoric, civil government, and commercial law.

*Montana State College of Agriculture and Mechanic Arts.*—The business department of this college offers two courses in bookkeeping and one in stenography and typewriting, occupying one year each when taken in connection with other studies.

*University of Arizona.*—One of the special courses in this institution is the commercial course of one year. It includes business arithmetic, bookkeeping, stenography, typewriting, penmanship, and commercial law.

*New Mexico College of Agriculture and Mechanic Arts.*—The business department of this institution has two parallel courses of one year each. The first course includes bookkeeping, commercial arithmetic, grammar, penmanship, spelling, commercial law. The second course includes stenography and typewriting. Spanish is also taught.

*North Georgia Agricultural College.*—The business course covers four years of study and is parallel with the two preparatory years and the freshman and sophomore years in the A. B. and B. S. courses. The course includes English, commercial arithmetic, United States history, Latin, algebra, geometry, trigonometry, surveying, commercial and physical geography, botany, zoology, physiology, general chemistry, physics, civil government, general history, English and American literature, political economy, bookkeeping, banking, stenography, typewriting, telegraphy.

The courses of study as outlined above for the 11 public institutions may be taken as typical of the commercial or business courses offered by a majority of the 161 private colleges mentioned in the list in Table 5.

## APPENDIX KI.

UNIVERSITY OF PENNSYLVANIA  
THE COLLEGE  
CIRCULAR C, 1901  
THE COURSES IN FINANCE AND ECONOMY.  
(THE WHARTON SCHOOL)

## Officers.

Charles C. Harrison, LL.D., *President*.  
Edward F. Smith, Ph.D., Sc.D., *Vice-President*.  
Josiah H. Penniman, Ph.D., *Dean of the College*.

Rev. George S. Fullerton, Ph.D., *Philosophy*.  
Simon N. Patten, Ph.D., *Political Economy*.  
Joseph French Johnson, A.B., *Journalism*.  
John Bach McMaster, A.M., Litt.D., *American History*.  
Edward P. Cheyney, A.M., *European History*.  
Emory R. Johnson, Ph.D., *Transmigration*.  
Samuel M. Lindsay, Ph.D., *Sociology*.  
Lee S. Rowe, Ph.D., *Physical Science*.  
Henry R. Senger, Ph.D., *Political Economy*.  
James T. Young, Ph.D., *Administrative*.  
Albert S. Bolles, LL.D., *Business*.  
William E. Lingelbach, A.B., *European History*.  
William H. Allen, Ph.D., *Public Law*.  
Frederick A. Cleveland, Ph.D., *Practical Finance*.  
Edward S. Menie, Ph.D., *Industry and Business*.  
Thomas R. White, B.L., LL.B., *Business Law*.  
William E. Meekel, *Common Law*.  
Elihu S. Shumway, A.M., Ph.D., *Business Law*.

Origin of the  
Wharton  
School.

The Wharton School of Finance and Economy was founded in 1881 by Joseph Wharton, Esq., of Philadelphia, as one of the departments in the College of the University of Pennsylvania. The founder of the School expressed the desire that it should offer facilities for obtaining:

1. "An adequate education in the principles underlying successful civil government."

2. "A training suitable for those who intend to engage in business and to undertake the management of property."

Courses in  
Finance and  
Economy

Begin as a two-year course for Juniors and Seniors, the curriculum has been expanded until it now embraces the following courses:

1. The four-year course in Finance and Economy leading to the degree of Bachelor of Science in Economics,\* described elsewhere in this circular.

2. The four-year course in Commerce and Industry, described in Circular B. See p. 352.

3. The two-year course in Social Work, described in Circular M.

4. The two-year course in Business Practice and Banking, described in Circular N. See p. 357.

The purpose  
of the  
Course.

Students who find it impracticable to take a regular course may be admitted to a partial course, upon presenting satisfactory evidence of fitness for the studies they wish to pursue.

The basis of the four-year course in Finance and Economy is the study of the social sciences. Among these are grouped modern languages, philosophy, commerce, banking, journalism and kindred topics. It is believed that the growth of the political and social sciences in recent years furnishes a fund of knowledge available for a liberal education. The purpose of the course is to present this knowledge in such a way as to afford students the intel-

\* This course is so arranged as to include four years' work in Journalism for those who elect this subject.

lectual discipline of a college education, while at the same time to make of them broad-minded and practical men of affairs, equipped with an understanding of the complex problems of modern life, and imbued with the spirit of good citizenship. Its studies and methods are designed to be of assistance to those who intend to enter the higher walks of business, whether manufacturing, mercantile trade, commerce, transportation or banking, and also to those who look forward to careers in journalism, in law, in the civil or consular service, or to work in connection with organised charities.

A brief survey of the field covered by the course will serve to make its nature clearer. Man's welfare depends in high degree upon the natural advantages of different portions of the earth's surface. Courses in physical and commercial geography, in industrial history and in the development of civilisation, extending through the whole four years of study, tend to emphasise the extent of this dependence. Man has at no time been the passive slave of his surroundings. His activities in shaping natural conditions to suit his purposes receive attention in the courses in political economy, commerce and transportation, which also extend over the whole four years of instruction. In addition to the conditions of individual and national welfare, the relation between man and goods, the circumstances determining value and price, the vexed questions of the distribution of wealth between labour and capital, the standard of value and the medium of exchange, the causes of panics and depressions, etc., receive attention in these courses.

In his efforts to master nature, man early entered into political and social union with his fellows, and the resulting types of organisation furnish the material for the political, legal and sociological courses included in the curriculum. American and European constitutions are studied in the Freshman year. In subsequent years, such topics as legislative procedure, business law, modern legislative problems, practical politics, public administration and colonial government receive special attention. The study of sociology is begun in the Junior year, and includes, in addition to the principles of sociology, an account of the origin and development of different types of society, an analysis of race traits and a survey of race distribution, a description and criticism of modern charitable and penal institutions, and a review of social reforms and reformers in the nineteenth century.

An important element in the course, also extending over the whole four years of study, is the work in history. Especial attention is given to the history of the United States and of England. Those epochs in general European history which have had the greatest influence in shaping the course of civilisation are dealt with, and an effort is made to engender in the minds of students the historical spirit so important to the wise solution of the social questions of our own day.

The study of practical finance, including accounting, business practice, credit and money, banking and corporation finance is also begun in the Freshman year. The effort in the treatment of these topics is to familiarise the student, not merely with the theoretical principles necessary to their comprehension, but also with the actual operations of business life. While it is recognised that no amount of text-book or lecture instruction can take the place of experience in the office, exchange or bank, it is yet believed that typical business operations may be made intelligible to college classes, and that a student's mastery of the concrete details of the business in which he may happen to engage after graduation may be greatly facilitated by this portion of the course.

The work in philosophy, literature, mathematics, and languages which forms a component part of the curriculum is sufficiently indicated in the outline of courses given elsewhere.

With direct reference to practical careers other than business, instruction is given in journalism, and in the elements of law. The course in journalism begins in the Freshman year with newspaper practice, including exercises in reporting, in condensation, in the editing of copy and in proof-reading. The same work is continued in the Sophomore year, when it is supplemented by lectures and reports prepared by the students themselves on current topics. In the Junior and Senior years more advanced work along the same lines is required, including editorial writing and the application

of the knowledge acquired to practical work for the college and city papers. In addition, courses of lectures are given on the art and history of newspaper making and newspaper law.

The course in elementary law covers four hours a week in the Junior and Senior years. In the former, common law and elementary Roman law are studied by the aid of text-books and lectures. This leads in the Senior year to courses on the history of legal institutions and on the interpretation of the United States Constitution by the Federal Courts. Though designed primarily to prepare men to take a regular course in law, it is believed that these studies will be valuable to all classes of students.

The plan of instruction embraces recitations, lectures and the preparation of papers. An earnest effort is made to train the students to think independently, and to exclude all dogmatism in political and economic teaching.

Original research by the students, under the direction of the instructors, is a part of the work of the school, and is encouraged by the offer of the WILLIS TERRY prize of \$120 to the member of the Senior class preparing the best essay on a given topic each year.\* The results of some of these investigations have been published as follows :

"The Recent Development of American Industries," by the Class of '91, pp. 111.

"The City Government of Philadelphia," by the Class of '93, pp. 278.

"Railway Co-operation," by Charles S. Langstroth and Wilson Stilz of the Class of '98, pp. 220.

The tuition fee is one hundred and fifty (150.00) dollars per annum.

FOUR-YEAR COURSE IN FINANCE AND ECONOMY.

Freshman Year.

	Hrs.		Hrs.
English Composition - - -	2	American History - - -	2
English Language - - -	1	Accounting - - -	3
German or French - - -	3	Physical and Economic Geography	2
{ Mathematics or - - -	2	Constitutional Law - - -	2
{ Practical Economic Problems	2	Journalism† - - -	1

Sophomore Year.

	Hrs.		Hrs.
English Literature - - -	2	Theory and Geography of Com-	
German or French - - -	3	merce - - -	2
European History - - -	3	Political Economy - - -	2
Practical Finance and Foreign		Legislative Procedure - - -	1
Exchange - - -	2	Journalism‡ - - -	2
Business Law - - -	1	Public Speaking (optional)	1

Junior Year.§

	Hrs.		Hrs.
Logic and Ethics - - -	2	Elementary Common Law - - -	2
English Literature - - -	2	Roman Law - - -	2
Economics - - -	2	Industrial Development of the	
Sociology - - -	2	United States - - -	2
Modern Legislative Problems -	2	Journalism - - -	2
American History - - -	2	Charities and Correction - - -	1
Modern European History - -	2	Race Traits and Distribution -	1
English Industrial Development	2	Practical Politics - - -	2
Money and Credit - - -	2		

\* This prize was established through the generosity of Henry C. Terry, Esq., of Philadelphia, in memory of his son Willis, a member of the Class of 1896.

† For students in Journalism who omit *Accounting* in the second term.

‡ For students in Journalism who omit *Theory and Geography of Commerce*.

§ All the courses in the Junior and Senior years are elective. In each of these years the student is required to take a total of sixteen hours.



Senior Year.\*

	Hrs.		Hrs.
Public Finance - - -	2	American Commerce and Com	
Public Administration - - -	2	mercial Relations - - -	2
English Civilisation - - -	2	Principles of Government - - -	2
Social Reformers - - -	2	Municipal Government - - -	1
European History - - -	2	International Law - - -	1
American History - - -	2	English Legal Institutions - - -	2
Transportation - - -	2	Court Decisions on the Federal	
Colonial Government - - -	2	Constitution - - -	2
Panics and Depressions - - -	1	Journalism - - -	2
Corporation Finance - - -	1		

REPRESENTATIVE COURSES AS DESCRIBED IN THE UNIVERSITY CATALOGUE.

Professor PATTEN :

6. *Advanced Political Economy*.—This course is designed primarily as an introduction to social philosophy. Mill's *Political Economy* is used as a text-book. Each of the leading doctrines is traced through the various phases of its development until it assumes its final form in the writings of Mill. Juniors in Finance and Economy. Two hours.

7. *The Development of English Civilisation*.—A study of the social progress of England during the last three centuries. The facts in regard to each great industrial epoch are presented, and their influence on national life, thought and activity, considered. Special attention is given to those phases of English development which throw light upon the trend of American civilisation. Elective for Seniors in Finance and Economy. Two hours.

Professor J. F. JOHNSON :

8. *Money and Credit*.—Lectures on the methods and principles of banking; the national bank note system compared with the issues of Canadian, French, German and English banks; the world's credit machinery; the causes of gold movements; panics; the influence of speculation upon prices, &c. Dunbar's *History and Theory of Banking*; Bagehot's *Lombard Street*; *Report of the Monetary Commission*. Elective for Juniors in Finance and Economy. Two hours.

5. *Practical Finance*.—The organisation and financiering of corporations and trusts. Stock and produce exchange. Investment and speculation in stocks and bonds. Jenks' *Trust Problem* and *Financial Review* published by *Commercial and Financial Chronicle*. Sophomores in Finance and Economy. Two hours (*First Term*).

6. *Foreign Exchange and the Money Market*.—The phenomena of the money market in their relation to trade, industry and speculation. The principles regulating the flow of gold and currency in domestic and international settlements. The machinery of the domestic and foreign exchanges. Goschen's *Foreign Exchange*, Clare's *ABC of Foreign Exchange*. Sophomores in Finance and Economy. Two hours (*Second Term*).

Assistant Professor ROWE :

9. *Modern Legislative Problems*.—Relation of the individual to the State, in Europe and the United States. Limitations on legislative action. Contrast between American and European ideas concerning the functions and powers of government. The development of individual liberty in modern times, as illustrated in our political system by the rights of citizenship, State and federal. Juniors in Finance and Economy. Two hours.

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\* All the courses in the Junior and Senior years are elective. In each of these years the student is required to take a total of sixteen hours.



Assistant Professor E. R. JOHNSON :

15. *Transportation*.—A study of railway transportation, inland navigation and ocean shipping, with special reference to the United States. Lectures, essays and readings. Elective for Seniors in Finance and Economy. Two hours.

Assistant Professor LINDSAY :

20. *Sociology*.—I. Study of ancient and modern social ideals, and of the projected types of an ideal society. Social elements and history of sociological theories; modern theories concerning social organisation. Plato's *Republic*, Aristotle's *Politics* and *Ideal Commonwealths* constitute part of the required reading of the course. II. Study and analysis of historical and existing societies. Special reference to the general stages of social evolution, to the factors in social psychology, to the requisites of social survival, social efficiency and social control. Lectures follow *Manual and Outlines*. Assigned readings in Giddings' *Principles of Sociology* and *Theory of Socialisation*; Patten's *Theory of Social Forces*; Ross' *Social Control*; Ward's *Dynamic Sociology*; Spencer's *Principles of Sociology*; and others.. Juniors in Finance and Economy. Two hours.

Assistant Professor SEAGER :

4. *Public Finance*.—A course on public expenditures and public revenues with special reference to the financial systems of the United States, of Pennsylvania and of Philadelphia. Daniels' *Public Finance*. Seniors in Finance and Economy. Two hours.

Dr. YOUNG :

1. *American Constitutional Law*.—A study of the theory and practical workings of the Federal Constitution. Recent changes and present tendencies. Required readings, lectures and leading cases. Freshmen in Finance and Economy. Two hours (*First Term*).

2. *European Constitutional Law*.—The Federal Constitutions of Switzerland and Germany. Comparisons of Swiss democracy and German federalism with the American constitution. Growth of the federal form. Lectures and required readings. Freshmen in Finance and Economy. Two hours (*Second Term*).

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## APPENDIX K2.

### UNIVERSITY OF PENNSYLVANIA THE COLLEGE.

#### THE COURSE IN COMMERCE AND INDUSTRY.

CIRCULAR P., 1901-2.

The course in Commerce and Industry has been established by the University of Pennsylvania to meet a recognised need for commercial education of collegiate grade.

Changes in industry have of late years increased the responsibilities of business men, and caused an urgent demand for the best industrial leadership. Both industry and commerce, formerly content to meet local needs, are now conducted on a large scale, and are seeking the world's markets. The conduct of large enterprises calls for highly trained men of administrative ability. It is the recognition of this fact which has given the business interests such a large influence in our public life. Business men have become leaders in thought and action in the social and political concerns of the community.

The course in Commerce and Industry offered by the University of Pennsylvania is constructed with special reference to the needs of young men intending upon the completion of their college course, to engage in industrial or commercial pursuits. The requisites of financial success in life are good business habits, information regarding the arts and methods of business details, and a knowledge of industrial and commercial affairs.

Collegiate instruction cannot be substituted for business experience, but it can give the prospective banker, shipper, railway manager and manufacturer information and training analogous to that which faculties of law and medicine offer to men preparing for those professions.

In addition to giving the student the discipline of a college education, the course in Commerce and Industry aims to furnish him with the special knowledge of mercantile and industrial activities that will fit him for the higher walks of commercial life, whether in internal or foreign trade, in the conduct of manufacturing or transportation enterprises, or in the consular service. The basis of instruction is economic and political science; and to this is added the study of business law, business methods, banking, rail-roading, shipping, and the history and present condition of both trade and industry. The course also includes modern languages, which are of increasing importance in the commercial world.

The admission of students to this course is governed by the general regulations of the College Faculty, the conditions being the same as those for the course in Finance and Economy (see Circular on Admission to College). On the completion of the four years' course, students receive the degree of Bachelor of Science in Economics. The tuition fee is one hundred and fifty (\$150.00) dollars per annum. The work of the Freshman and Sophomore years is prescribed; that of the Junior and Senior years elective. The required studies of the first two years are those which are considered fundamental and essential to a well-proportioned business education. Emphasis is laid upon economics, political science, accounting, English and foreign languages. The work of the Junior and Senior years is so arranged as to enable the student to specialise with reference to his future vocation.

The following brief description of the subjects studied during the four years will suggest the scope of the course and the relation of its several parts to each other.

In the development of modern American mercantile practice, certain processes and methods of conducting business have assumed stable forms, and the knowledge of these forms is an essential part of the equipment of men of affairs. Thus, in the first year of the course, attention is given to the subject of accounting, not so much with the idea of making bookkeepers as for the purpose of establishing the principles upon which accounts are kept; so that the nature of a balance sheet and the processes for determining profits, the mode of conducting the business affairs of corporations, and like matters of importance shall be brought home to the student. In the following year, a course in practical finance is designed to familiarise students with the processes and methods of a stock market, the mode of launching corporate enterprises, the mechanism of the foreign exchanges, and kindred topics. The study of banking and credit gives the student a knowledge of the functions and services of banks. It also acquaints him with the organisation of the national banks, their modes of doing business, and their relation both to the national treasury and the world of business. The study of commercial credits exhibits this important feature of business life in its theoretical and practical aspects. The course shows what credit has done to fructify commerce and industry, and how important it is that credit in different countries be employed strictly in accordance with the peculiar laws and customs of each.

Immediately associated with this subject is the consideration of mercantile law, for the purpose of acquainting the student with the ordinary law of contract, sale, carriage, agency, partnership, negotiable paper, and other instruments used in ordinary business transactions. It is not the detailed and special knowledge of the attorney which is sought in such instruction, but the more general information of the man of affairs. The recent multiplication of corporate enterprises and industrial combinations makes an understanding of corporations and trusts of the highest importance. The study of corporation law is designed to show how corporations are formed and operated, what are the legal checks upon their activities, and what should be the policy of the law toward these creatures of its own making.

The foundation for the study of foreign commerce and domestic industry is laid in a course dealing with physical and economic geography. Man's welfare depends in a high degree upon nature's gifts, and it is the purpose

Admission.

Degree.  
Tuition Fee

Business  
Law and  
Practice.

Accounting

Banking.

Credits.

Business  
Law.

Corporation  
Law.

Economic  
Geography.

of this fundamental course to show the measure of this dependence. The capacity of any given region of the earth's surface to develop a highly organised economic life depends upon such questions as altitude, coast line and river systems, rainfall, temperature and the presence of mineral deposits. These physical conditions determine in a large measure the location of population and the currents of trade. In the second year's work, these relations are studied more in detail in their application to foreign trade ; and the general tendencies of such international intercourse, both in times past and in the present, are made the topics of special consideration.

Commerce and industry depend on physical and economic conditions which foster or impede their development. The study of the resources of nations is requisite to an understanding of their development. Broadly speaking, we distinguish two types of civilisation ; that of the temperate zone, and that of the tropics. Each owes its character to differences in soil, climate and physical structure, as well as to differences in racial qualities and inherited traits. Two courses are devoted to economic resources. The one takes up the European countries, the other the tropical regions. They seek to show the industrial basis of society in these regions, that we may better understand in what degree and in what manner they may contribute to the general welfare of mankind. A course on commercial products deals especially with the exportable surplus of the different countries, and treats of the characteristics of the wares which constitute the staples of trade. In this work the collections of the Philadelphia Commercial Museum and the actual commercial appliances, products and methods as they are exhibited in the commercial and shipping trade of the city, will be studied.

The history and development of foreign trade is presented in two courses treating respectively of American and European Commerce and Commercial Relations. In each, the treatment will consider the industrial conditions out of which commerce grows and which determine its subject matter. Intimately associated with foreign commerce is the place which the various nations have held as carriers for themselves and other nations. Both the growth of commerce and the development of shipping may be promoted or impeded by national legislation, and such laws are made the subject of special study. Consideration is also given to the international regulation of commercial affairs by means of treaties. The motives which lead to such conventions, the forms which they take and their actual workings, give an insight into important matters of commercial policy and practice.

Modern trade involves transportation by land and sea. The railroads are an integral part of modern life, without which no country could have attained its present industrial organisation. The functions of the railroad are not always understood, and hostility to existing forms of railway management is not infrequent. It is the purpose of the study of transportation to make clear what have been the industrial services of the railroads, what is their relation to the state, and how that relation should be moulded to promote the public welfare. The relation of the railroad to other forms of transportation, like the common highway and the canal, receives attention.

Commerce is an incident of industry. The causes and conditions of industrial supremacy are rooted in race, soil, climate and a variety of physical and economic factors. In recent years the character and organisation of industry, particularly in the United States, have undergone radical transformation. Technical and economic motives have prompted the use of new appliances. They are so far reaching as to make our modern world quite unlike that of half a century ago. It is the purpose of the course devoted to these subjects to depict these changes, analyse their causes, and show the strength of the United States industrially.

Recent events have brought the people of the United States face to face with the problems of colonial possessions. Our economic outlook is no longer confined to our own continent. We are reaching out for foreign trade, and have acquired interests in distant seas. In these new possessions grave questions of social organisation and government control confront us. Our experience being too brief to be helpful, we must look to the experience of other nations for light. The principles, purposes and methods of colonial government practised by the European countries are the school to which we

must go for light upon our problems. But our relations to our new dependencies go further. They involve the contact of races of divergent physical, mental and moral capacities. In a systematic study of race traits and distribution, the student examines these conditions and investigates the relations which the different races bear to one another.

For the full and complete comprehension of the studies described, a knowledge of the general principles of economics and public law is of the utmost importance. Political Economy analyses the production of wealth, leads the student to the consideration of what constitutes national welfare, and of the conditions of productiveness, both for the individual and the nation. It introduces him to the vexed questions which concern the returns of the landlord, the capitalist, the industrial manager and the workman. It concerns itself with the mode in which the division of labour is carried out, and with the mechanism of exchange which enables the producer to find a consumer. While some of the more important problems are properly made the subject of more minute investigation in distinct sources, a general view of the less technical and special aspects of these questions forms the illustrative material in the study of general economic principles.

Economic  
and Public  
Law.

In this way the student becomes acquainted with the more general bearings of such topics as money and currency (including coinage laws, greenbacks and the "endless chain" national banking system, bank note issues based on assets, free coinage of silver, monometallism, etc.); tariff (including a survey of the tariff history of the United States, regarded as a special phase of its industrial history); an examination of the arguments advanced for protection and for free trade; and an analysis of the causes which have lessened the importance of the tariff question as a national issue); labour (including trades unions, strikes, lockouts, wages, machinery); taxation (single tax, corporation taxes, excise, land, income, inheritance, property taxes); railroads (economic and social aspects, competition, combination, public regulation, relation to waterways); criminal classes (prisons, reformatory schools, convict labour, penal reforms); charities (support of the poor, indoor and outdoor relief, hospitals, state aid); education (relation of the state to primary, secondary and higher education); trusts and combinations (in their effect upon capital, labour and prices); speculation (relation to prices).

A more extended study of the general principles of economics can be taken in the Junior year. The study of economic theory leads to the subject of public finance, and to the development of industry and civilisation in England. Through its taxing power the government is constantly exerting an influence for good or evil on the economic life of the people. What is the extent of that influence, how is it manifested, and what are its effects? These are the questions of public finance, and they show the intimate relation of this subject to the groundwork of economic theory. Without an understanding of the organisation and laws of industrial society, one cannot predict the results of taxation or measure its effects. Probably no special subject offers so many direct applications of economic theory. To the consideration of how our present industrial system has grown into being, and what are its antecedents, two courses are devoted. In the Junior year a course in the Industrial History of England considers in detail the rise of Great Britain, the most brilliant exponent of our modern industrial civilisation, its position of power and supremacy; and in the Senior year there is a course devoted to the exposition of the relation of racial traits and economic conditions to the development of English civilisation.

Not less interesting than the industrial and commercial organisation of modern society is its political constitution, the rights and duties of public bodies; and all that belongs in the broad field of public law. Instruction in this field begins with a course in the first year upon Constitutional Law, which is devoted to the exposition of the Constitution of the United States. The experience of other nations, notably those which have federal governments, like Germany and Switzerland, is studied because it throws light upon the political organisation of our own people.

This course comes in the Freshman year, and is followed in the second year by a course upon Legislative Procedure, which shows in detail and by



means of actual participation of the students in a legislative body, the way in which measures originate and are passed by the national Congress.

As the bonds of common commercial interests between nations are strengthened, it becomes important to know how the problems of legislation in other countries compare with our own, and how the relations between nations are regulated. With the expansion of commercial relations, the business man must make himself acquainted with the protection accorded to personal and property rights in different parts of the world. The study of legislative problems in the Junior year takes up the questions which concern the governments of Europe, and discusses them with reference both to the political and social conditions of which they are the outcome. It seeks to enlist the interest of the student in the world's affairs, and gives him the materials for comprehending them correctly.

In the Senior year, the legal relations of the family of nations receive attention in the study of international law. The development of definite international rights and obligations has contributed materially to the growth of international trade, and the observance of its precepts is indispensable to the orderly conduct of business in foreign countries. The interest of Americans in these questions has been greatly increased by recent events.

Instruction in history, English composition and literature, mathematics and chemistry forms a part of the course. One modern language is required of all students, with provision for a second if desired. Students who have pursued studies in French will be permitted to elect the study of Spanish in the upper years.

In the Junior and Senior years the student must select twelve hours a week from the studies enumerated below. Subject to this restriction, he is at liberty to choose four hours a week from other courses given in the College. Courses in Spanish, English literature, logic, ethics, history, sociology and government are open in some measure to such selection.

The branches of study are distributed as follows. The number of hours is given by the year, though in actual instruction some of the one-hour courses are given two hours for a half-year.

OUTLINE OF THE COURSE.

Freshman Year.

Hrs.				Hrs.			
English Composition	-	-	2	Physical and Economic Geography	-	-	2
English Language	-	-	1	Constitutional Law	-	-	2
Mathematics	-	-	2	Two of the following:			
or Chemistry or	-	-	4	French	-	-	3
Practical Economic Problems	-	-	2	German	-	-	3
Accounting	-	-	3	American History	-	-	2

Sophomore Year.

Hrs.				Hrs.			
English Literature	-	-	2	Political Economy	-	-	2
Practical Finance and Foreign Exchange	-	-	2	Legislative Procedure	-	-	1
Business Law	-	-	1	Public Speaking (optional)	-	-	1
Theory and Geography of Commerce	-	-	2	Two of the following:			
				German	-	-	3
				French	-	-	3
				European History	-	-	3

Junior Year.†

Hrs.				Hrs.			
Economics	-	-	2	Industrial History	-	-	2
American Commerce	-	-	2	Economic Resources of Europe and United States	-	-	2
Money and Banking	-	-	2	Recent Changes in Industry	-	-	1
Commercial Treaties	-	-	1	Modern Legislative Problems	-	-	2
Corporation Law	-	-	1	Field Work—Study of Business Methods	-	-	2
Commercial Products	-	-	1				
English Literature	-	-	2				

\* For those only who present higher mathematics for entrance.

† No studies are prescribed. Sixteen hours are required in each year, of which at least twelve must be selected from those here named.

Senior Year.*		
	Hrs.	Hrs.
Finance - - - - -	2	English Civilisation - - - 2
European Commerce - - -	2	International Law - - - 2
Colonial Government - - -	2	Race Traits and Distribution - 2
Economic Resources of Tropical		International Trade and Shipping 1
Countries - - - - -	2	Inland Trade and Transportation 1
Causes of Industrial Supremacy	2	Commercial Credits - - - 1

- The main features of the course may be summarised as follows :
1. Geography is studied for four years, one year being given to physical and economic geography, and three years being devoted to the geography of commerce and industries.
  2. Political Economy is pursued for three years.
  3. Courses relating to the organisation and activity of the Government are found in each of the four years.
  4. Provision is made for three years of history, one of the three years being given to industrial history. History may also be elected for a fourth year.
  5. In addition to the work in Commercial Geography the study of commerce and commercial policy is pursued for two years.
  6. Banking and Transportation are each studied for a year and may be elected for a longer time.
  7. There are three courses relating to Business and Commercial Law and Commercial Credits.
  8. Four courses are concerned with the study of industry, two of these dealing with the general conditions of industrial success, and two of them consisting of a study of the actual organisation and management of the leading classes of business.

A prominent place in the work of the two upper years is given to the concrete study of the organisation and methods prevailing in the actual business world. The students visit the larger industrial establishments of Philadelphia, and study the organisation and extent of the business done by each of them. This is followed by a study of the methods of conducting business in the leading branches of transportation, manufacturing and commerce. Some lectures are given by men actually engaged in business.

The facilities for the study of commerce and industry in Philadelphia are exceptional. The city's manufacturing industries are of great magnitude and diversity ; two important railway systems have their main offices in the city, and the foreign and domestic maritime commerce of the port is large. The Philadelphia Commercial Museum is the only institution of the kind in the United States, and its library and rich collections afford excellent material for the study of commercial questions. For the investigation of economic and political questions the University Library offers the best of facilities.

For further information address the Dean, Dr. Josiah H. Penniman, College Hall, University of Pennsylvania, Philadelphia, Pa.

APPENDIX K3.

UNIVERSITY OF PENNSYLVANIA, THE COLLEGE.

SPECIAL COURSE IN BUSINESS PRACTISE AND BANKING.

CIRCULAR O, 1900-1 (EXTRACT).

This course extends over two years and is designed to prepare young men, as far as is possible in two years, for the intelligent conduct of banking or general business. The work is in every sense college work, the aim being to

\* No studies are prescribed. Sixteen hours are required in each year of which at least twelve must be selected from those here named.



give the student an understanding of principles rather than a superficial knowledge of details. It must not be supposed, however, that this special course of two years will train and broaden a young man as does a regular college course. Every young man is advised to take a regular course if he can do so.

The students hear, each year, a number of addresses by men prominent in business and public life.

Anyone desiring to enter the course must first satisfy the Committee on Special Students, Professor Edgar Marburg, chairman, that he is qualified to undertake the work. Circular A.

The tuition fee is \$150 a year. Board and lodgings can be had near the University Buildings at \$5.00 a week and upward. The necessary books cost from \$15.00 to \$20.00 a year.

Students who complete the full course and pass satisfactory examinations in each branch will be awarded a certificate of proficiency.

**BUSINESS PRACTICE AND BANKING,  
FIRST YEAR.**

SUBJECT	INSTRUCTOR	Hours per week	
		1st Term	2nd Term
*1. Accounting . . . . .	Dr. Meade . . . . .	3	
2. Corporation Accounting . . . . .	Dr. Meade . . . . .		3
3. Physical and Economic Geography . . . . .	Dr. Allen . . . . .	2	2
4. The Money Market . . . . .	Prof. J. F. Johnson . . . . .	2	-
5. Domestic and Foreign Exchange . . . . .	Prof. J. F. Johnson . . . . .	-	2
6. Banking Law and Practice . . . . .	Dr. Bolles . . . . .	1	1
7. Problems in Economics and Finance . . . . .	Prof. R. P. Falkner . . . . .	2	2
8. American History . . . . .	Prof. McMaster . . . . .	2	2
9. American Political Institutions . . . . .	Dr. Young . . . . .	2	-
10. European Political Institutions . . . . .	Dr. Young . . . . .	-	2
11. English Composition . . . . .	Dr. Quinn . . . . .	2	2
12. English Language . . . . .	Prof. Easton . . . . .	1	1
		17	17

**SECOND YEAR.**

SUBJECT	INSTRUCTOR	Hours per week	
		1st Term	2nd Term
13. Business Law . . . . .	Professor Falkner . . . . .	1	1
14. Theory of Money and Credit . . . . .	Prof. J. F. Johnson . . . . .	2	
15. Modern Banks of Issue and Deposit . . . . .	Prof. J. F. Johnson . . . . .		2
16. Political Economy . . . . .	Dr. Allen . . . . .	2	2
17. History of Banking . . . . .	Dr. Cleveland . . . . .	2	-
18. Panics and Depressions . . . . .	Dr. Cleveland . . . . .		2
19. Investment and Speculation . . . . .	Dr. Cleveland . . . . .	2	
20. Financiering of Trusts and Corporations . . . . .	Dr. Cleveland . . . . .		2
21. Monetary History . . . . .	Prof. Falkner . . . . .	2	2
22. Public Finance . . . . .	Professor Seager . . . . .	2	2
23. American Commerce . . . . .	Dr. Meade . . . . .	2	2
24. English Literature . . . . .	Prof. Penniman . . . . .		2
25. English Literature . . . . .	Prof. Schelling . . . . .	2	
		17	17

\* The numbers refer to the description of courses on the following pages of this circular

## DESCRIPTION OF COURSES.

## FIRST YEAR.

1. *Accounting*.—Instruction in the principles and methods of keeping books by both single entry and double entry. Three hours (*First Term*).

2. *Corporation Accounting*.—Instruction in the accounts of corporations especially banks and railroads. Three hours (*Second Term*).

3. *Physical and Economic Geography*.—A study of elementary physical geography and geology, and their relation to the industrial and social life of the people of the United States. Tarr's *Elementary Physical Geography*, Monographs I. to X. of the National Geographic Society. Lectures, essays and readings. Freshmen in Finance and Economy. Two hours.

4. *The Money Market*.—A study of the phenomena of the money market and its relations to industry, trade, investment and speculation. As the rate of interest is the most important fact in the money market, the course aims to group together all the forces and conditions which exert an influence upon it. The relation of New York to the rest of the country, as its commercial and financial centre, is described; various reasons why money flows towards New York, such as the law as to reserves, the wide demand for New York exchange, and the constant demand for loans in New York for speculative purposes. It is shown why currency moves from the East to the West in the fall and flows back again in the spring; what effect an increase of the money supply has upon the interest rate and upon speculation; how a national deficit or surplus disturbs the supply of currency and so tends to unsettle business conditions; why the rate of interest tends to rise in good times and fall in hard times; why it is necessarily influenced by rates of interest in European money markets. For purposes of illustration, the students make reports on the fluctuations of New York exchange in different parts of the country, explaining so far as possible the interior movements of currency indicated by the quotations. The course includes a study of the relation of the Treasury Department to the money market; of the effect of the sales or purchases of bonds; of the necessity for deposits of public money in the banks; of the work done by note or bill brokers; of the various methods of transferring currency, and of domestic bills of exchange as instruments for the transfer of capital. For the purpose of comparison, analysis is also made of the English money market, students being required to read Bagehot's "Lombard Street." Two hours (*First Term*).

5. *Domestic and Foreign Exchange*.—This course begins with a discussion of the nature and advantages of foreign trade, in which it is shown that a nation's imports of merchandise under normal conditions tend to be balanced by its exports. The method of payment through bills of exchange, sterling bills being most in demand throughout the world, is described. The importance of international movements of capital and various forms of credit in the effect upon the quotations of foreign bills is considered at length; also the effect of foreign travel; of the payment of carrying charges; and of differences in the rate of interest in different financial centres. The aim of the course is to make the student understand the nature of all the forces which act upon foreign exchange rates, and so to cause an export or import of gold. He is required to know the monetary systems of the United States, Great Britain, France and Germany, and of one silver-standard country like Mexico, and of one paper-standard country like Brazil. The course aims to explain how payments are effected between countries of different standards, and to make the student understand through what concrete operations such payments are effected. It is shown how an inflation of the currency, by lowering the rate of interest, increases the demand for foreign exchange, and so leads inevitably to an export of gold. For purposes of illustration, detailed study is made of the foreign exchange market in this country between 1890-96, and of the methods adopted by the Bank of France for the payment of the indemnity at the close of the Franco-Prussian War. Use is made of the following books: "Monetary Systems of the World," Muhleman; "Foreign Exchange," Goschen; "A B C of Foreign Exchanges," Clare. Two hours (*Second Term*).

6. *Banking Law and Practice*.—This course takes up the details of the organisation and operation of a bank, with special reference to its legal aspects. The study of methods of organisation involves a knowledge of both State and national bank acts and the advantages to be gained under each. The rights, duties and liabilities of the stock subscribers and the trustees during the formative period are considered at length. After the organisation has been completed a new set of questions arise. These are grouped around rights, duties and liabilities of bank officers: (1) toward each other; (2) toward the stockholder; (3) toward the depositor; (4) toward the public. The authority of Bank officers, its source and extent, what an officer may and may not do: what acts he is personally liable for and for what acts the corporation is liable, are practical questions which the president, the director, the cashier, the minor officer and special agent of the bank must each answer for himself. It is to enable men to meet the technical requirements of the banking business that this course is given. The course includes a review of important cases under the National Banking Act, and a study, from the banker's point of view, of the law of negotiable paper. Two hours (*First Term*).

7. *Problems in Economics and Finance*.—The object of this course is to lay the foundation for the study of economic theory, by directing attention to the problems that are presented to men of public and private affairs. In the study of the corporation problem, trusts, the labour question, the tariff, colonisation, etc., the student is brought into contact with economic sources, and becomes accustomed to think of particular questions. This serves as a basis for the more general conclusions of political economy and finance. Each student is required, as a part of the work, to write essays and report results of independent research. Two hours.

8. *American History*.—The political and industrial history of the United States from 1765 to 1830. Lectures: in connection with which an outline prepared for this class is used; a supplementary course of reading, with synopsis of the books read, is prescribed, maps and diagrams are required, and a certain number of carefully written essays assigned as the work of the students. Two hours.

9. *American Political Institutions*.—A study of the theory and practical workings of the Federal Constitution. Recent changes and present tendencies. Required readings, lectures and leading cases. Two hours (*First Term*).

10. *European Political Institutions*.—The Federal Constitutions of Switzerland and Germany. Comparisons with the American Constitution. Growth of the Federal form. Lectures and required readings. Two hours (*Second Term*).

11. *Composition*.—The work is based on a study of American prose authors (Franklin, Irving, Hawthorne, Poe). After correction, the compositions must, if necessary, be rewritten by the student. Genung's "Practical Elements of Rhetoric" is used as a text book. Two hours.

12. *English Language and Analysis*. It is the purpose of this course to prepare for the rhetorical and literary courses which accompany and follow it. The principles of general grammar, as applied to the mother tongue, are reviewed, with exercises in the analysis of difficult constructions, but the greater part of the time is devoted to the structure of the English period. The history of the English Language is studied in outline, with reference to the sources of its vocabulary. Lounsbury's "English Language." One hour.

#### SECOND YEAR.

13. *Business Law*. Industrial progress is possible only as the members of society come to have a better understanding of their relations one to another, a well understood and well established order is pre-requisite to co-operative efforts. It is the aim of this course to give to the student a grasp of the leading principles of law which are essential to orderly

business methods. The law which forms so large a part of the rules which govern bills and notes, surety, payments, and other commercial and industrial relations, is studied from text-book and assigned readings. The leading principles of the laws of fire and life insurance, warehouse keepers, common carriers, safety deposits, stockholders and officers of corporations are made the subjects of special lectures. The laws which govern maritime commerce and foreign trade are drawn from consular reports, official ordinances, etc. The student is taught to use the sources of legal knowledge. He is expected to know the statutes of the State in which he intends to do business governing the principal industrial and commercial relations. To this end the student is required to make analyses of the laws of his State on subjects as assigned, and is held to account for a knowledge of content. One hour.

14. *Theory of Money and Credit*.—It is the purpose of this course to give the student a firm grasp of the theory of money and credit, and an understanding of the important services they perform in the world of business. The course includes a study of the functions of money as a medium of exchange, as a standard of value, and as a standard of deferred payments; the nature of standard money and token or credit money; the arguments for and against bimetallism, fiat money, and a single standard. The study of money is illustrated from the experience of the United States since the Civil War, and of India, Russia and Japan in the last decade.

In the study of Credit it is the aim to make the student see clearly how it economises the use of money and facilitates the employment of capital. The functions of banks and clearance houses, therefore, are carefully analysed. Such subjects as the following are discussed: Credit as a promise to pay money, as a right of action, as permission to use another's capital; the effect of credit upon prices; the important services of banks as reservoirs of capital; the functions of savings banks, collateral loan banks, commercial banks; the conditions regulating rates of interest on call loans and on commercial paper; the importance of the deposit currency created by banks; bank reserves and the circumstances that should determine their relation to liabilities; the nature of the bank note and the reasons justifying its issue; the advantage of an elastic bank-note system in regulating the interior movement of currency and the outward flow of gold; the advantages of branch banks and of banks with small capital. The following books are used as texts: "Report of the Monetary Commission," Dunbar's "Chapters in the History and Theory of Banking." Two hours (*First Term*).

15. *Modern Banks of Issue and Deposit*.—It is the purpose of this course to give the student, through a study of the different systems of banking, a knowledge of the best results of banking experience throughout the world. In the beginning, in order that he may be clear as to the nature and advantages of deposit banking, the national banking system of the United States is studied, each student being required to prepare an original report on some phase of the subject. In this work use is made of the reports of the Comptroller of the Currency and of files of banking and financial journals. The study of bank-note issues begins with the systems which illustrates the banking principle. A thorough study in this connection is made of the Canadian banking law, and of the results which have been attained under its operation; also of the Scotch banking system and the Bank of France, and other European banks illustrating the principle. In this work students are required to make investigations and reports on their own account, using files of the *Canadian Bankers' Journal*, the *London Bankers' Magazine*, and other available sources. As illustrations of the so-called "currency principle," the Bank of England and the Imperial Bank of Germany are examined. The contrast is sharply drawn between the methods adopted to prevent the exportation of gold by these two Banks and the Bank of France. The bond-deposit principle of note issue is illustrated through the study of the free banking system in New York and the national bank-note system. The defects and advantages of the national bank-note system are critically noted, and various plans which have been

1. *History*—Business cycles are world-wide in character. In the past, the judgment, therefore, has been based on the fact that those which are to be expected to recur. To know that there are cycles in which depression, panic and depression follow each other in a regular, and efficient. Protection to industry and commerce. That the manager should know what are the evidences of depression, of speculation, of panic and depression. To study the data of business contemporary with the occurrence of events, to determine the relations between the various phases of the business cycle, and to prepare the student for broad business

He chooses a particular time period for investigation. He looks at prices, loans, deposits and interest rates. He looks at the prices of commodities and securities. He looks at the prices of bonds, investments, speculation, and so forth. In other words, he studies the concrete facts of the economy and draws his conclusions from them. He does not have a knowledge of this kind of the economy. He does not know the laws and repressions that are

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

[illegible]



The subject of speculation is studied to the end of determining the principles upon which it is based ; the relations of speculation to other forms of business ; what kinds of property must be made the subject of speculation ; and how far speculation is compatible with good business methods. Such special topics as the following are assigned : The price movements of cotton, corn, mess-pork and other staple commodities ; price movements of stocks, bonds, and other securities which are bought and sold on margins ; speculative real estate enterprises and their relation to investment ; the effect of speculation on the money market ; the analysis of recent "deals" in cotton, wheat, copper, etc. Attention is also given to the methods of speculation in boards of trade and stock exchanges, bucket shops, schemes to "beat" the market, puts, calls, corners, etc. The course includes a description of the methods of operation in the stock exchanges of New York and London, and on the Chicago Board of Trade. Two hours (*First Term*).

20. *Financiering of Trusts and Corporations*.—This course is devoted to a study of the development of corporation financiering in the United States. The subject of railway finance is discussed under the four heads of construction, consolidation, bankruptcy, and reorganisation. Particular questions are : the construction company ; leases and rentals ; the management of floating debts ; the rights of bondholders ; the nature and advantages of different varieties of bonds and debentures ; the rights of security holders in reorganisations ; causes of bankruptcy ; effect of reorganisation upon capital stock and upon fixed charges ; advantages of consolidations and means of effecting them ; recent methods of raising capital for betterments. The financial aspects of the recent industrial combinations are also investigated.

The method of work is that of lectures and reports. Each student is assigned special problems for his study, illustrating the matter brought out in the lectures. These reports are criticised by the instructor. As sources of information, the students utilise the annual reports of railroads, Poor's *Manual*, the *Financial Review*, and the files of the *Commercial and Financial Chronicle*. Two hours (*Second Term*).

21. *Monetary History*.—This is a lecture course designed to illustrate and explain the fundamental principles of money by reference to the monetary experiences of Europe and the United States during the last two hundred years. Especial attention is given to the evolution of the gold standard in England, to paper-money issues in France, to bimetallism in the Latin Union and the United States, and to the International monetary conferences of the last twenty years. Two hours.

22. *Public Finance*.—The subjects of public expenditures and public revenues, with special reference to the United States. H. C. Adam's "Public Finance" is used as a text-book, supplemented by lectures and reports on assigned topics. Two hours.

23. *American Commerce and Commercial Relations*.—A survey of the general principles of commerce. History of American commerce, carrying trade and ship-building. History of the commercial treaties and commercial policy of the United States. Discussion of present questions of commercial policy. Lectures and reports accompanied by an outline with assigned and optional readings. Two hours.

24. *Modern Novelists*.—Lectures on the development of the novel through Scott, Dickens, Thackeray, George Eliot, Hawthorne and others. Recitations and the frequent writing of brief papers on subjects involving collateral readings in the works of the authors discussed. Two hours (*First Term*).

25. *Modern Essayists*.—This course consists of lectures on the nature and growth of the familiar and literary essay ; in recitation on the subjects of the lectures ; and in the preparation of brief papers. These courses are designed to cultivate in the student the habit of careful reading, and the formulation in writing of his thoughts on what he has read. Two hours (*Second Term*).



## APPENDIX K 4.

UNIVERSITY OF PENNSYLVANIA  
THE COLLEGE  
COURSE IN COMMERCE, DIPLOMACY AND INTERNATIONAL  
LAW.

CIRCULAR N. 1899.

GENERAL PURPOSES.

A course of study, extending over two years, designed to prepare for

1. The diplomatic and consular service.
2. The conduct of international commercial relations, with special reference to South America and the Far East.

*The Civil Service.*—The expansion of American trade and commerce, with the coincident extension of political obligations to new quarters of the globe, is deeply affecting the commercial and political life of the country. To meet successfully the manifold problems which confront the government in our new possessions there is needed a trained corps of experts, possessing an intimate acquaintance with those branches of political and economic science which relate specifically to the class of questions to be dealt with.

*The Commercial Service.*—The eager search by American manufacturers for new markets in Europe and the Far East is but one indication of the opportunities offered to those who have been thoroughly prepared to undertake the conduct of commercial negotiations in foreign countries. The course in Commerce and Diplomacy has been arranged with a view to offer such training. Students who have completed the two years' course will be qualified to assume the responsibilities of commercial representatives or consular agents.

*Unity of the Course.*—In adjusting the work of the two years, the aim has been to combine with the technical preparation a general training in politics, law and economics. Thus the course on American Commercial Relations gives the student a knowledge of the policy of the Federal Government, and of the forces which determine such policy; while the work in the Economic Resources of Europe and the United States furnishes the material without which a thorough understanding of the conditions of our commercial development is impossible.

In much the same way, the general course in American Diplomacy and Foreign Relations is intended to serve as a groundwork for the study of International Law, particularly as its principles have been modified by the attitude of our government in international negotiations. In short, the work of the two years has been so correlated as to maintain an equilibrium between the study of general principles and the examination of specific material.

From a practical point of view, these courses supplement one another intimately. The consul in foreign parts deals primarily with questions of commerce; while in all countries where the system of consular jurisdiction prevails, a knowledge of international law, treaty rights and kindred matters is of the utmost importance to the merchant.

*Admission.* Anyone desiring to enter the course must first satisfy the Committee on Special Students, Professor Edgar Marburg, Chairman, that he is qualified to undertake the work.

*Methods of Work.*—The emphasis laid upon practical work is designed to prepare the student for immediate entry into the governmental or commercial service. The Commercial Museums, which are soon to be removed to the immediate vicinity of the University, will enable students to supplement the more formal instruction by means of a first-hand acquaintance

with the products and resources of every quarter of the globe. Reports on the trade and commerce of different portions of Asia and South America will be required in order to familiarise the student with the technique of one important branch of consular duties—the preparation of official documents.

*Advantages of this Training to the Citizen.*—While the course in Commerce and Diplomacy is intended primarily for those who contemplate public or business careers, the training offered will be of great value to the citizen. It is quite certain that questions of foreign policy will occupy an increasingly important place in American political life, which means that under our system of Republican government every citizen must pass judgment upon the policy of the country. The training of college men to correct habits of investigation and reasoning is therefore of the utmost importance to our future welfare.

*Outline of the Course.*—Courses aggregating sixteen hours per week will be required each year. Additional courses may be selected with the approval of the Committee. Students will thus be able to pursue such language work as they may deem advisable.

*Certificates.*—Students who complete the full course and pass satisfactory examinations in each branch will be awarded a certificate of proficiency.

FIRST YEAR (1899–1900).

(Sixteen hours per week required.)

Course.	Instructor.	Hours.
1. American Diplomacy (Foreign Relations) -	Dr. Ames -	2
2. Constitutional Law - - - -	Dr. Young -	2
3. Modern Legislative Problems - - -	Prof. Rowe -	2
4. Political Economy - - - -	Prof. Seager -	2
5. American Commerce and Commercial Relations - - - -	Prof. E. R. Johnson -	2
6. Practical Finance and Foreign Exchange -	Prof. J. F. Johnson -	2
7. Race Traits and Distribution - - -	Prof. Lindsay -	1
8. Economic Resources of Europe and the United States—Research Work - -	Prof. Falkner -	2
9. English (Expository Composition) -	- - - -	1

SECOND YEAR (1900–1901). 16

(Sixteen hours per week required.)

10. Recent Diplomatic History of Europe -	Dr. Whitcomb -	2
11. International Law - - - -	Prof. Rowe -	2
12. Jurisprudence - - - -	Mr. Mikell -	2
13. Government of Colonies and Dependencies	Dr. Young -	2
14. European Commerce and Commercial Relations - - - -	Prof. E. R. Johnson -	2
15. Economics - - - -	Prof. Patten -	2
16. Public Finance - - - -	Prof. Seager -	2
17. Economic Resources of Tropical Countries (including Asia and South America) -	Prof. Falkner -	2

16

OPTIONAL ELECTIVE.

(May be substituted for Course in Jurisprudence.)

18. Money and Banking - - - -	Prof. J. F. Johnson -	2
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*Outlines of Courses.*—The subjects treated fall under the following groups :—

- I. Diplomacy and International Law.
- II. Commerce.
- III. Government and Law.
- IV. Colonisation and Colonial Administration.
- V. Economics.
- VI. Finance and Banking.
- VII. Sociology.
- VIII. English.

## I.

## DIPLOMACY AND INTERNATIONAL LAW.

Dr. AMES :

1. *American Diplomacy and Foreign Relations*.—This course treats of the chief phases of our international relations from the beginning of the Revolution to the present time. Among the topics considered are the following : the first Committee on Foreign Relations, 1775 ; embassies and agencies in Europe ; the French Alliance ; the Treaty of Paris ; Jay's Treaty ; neutral trade and the right of search ; influence of the French Revolution and the Napoleonic wars upon our affairs ; boundary disputes ; the Louisiana purchase and successive annexations of territory ; the Monroe doctrine ; relation with the South American Republics ; canal diplomacy ; the slave trade ; complications during the Civil War ; Mexican intervention ; fisheries and Behring Sea ; international arbitration ; commercial treaties and reciprocity ; relations with the West Indies ; relations with the East.

Lectures, collateral reading and the preparation of papers, involving the use of Stevens' *Revolutionary Documents in European Archives* ; State Papers on Foreign Affairs, and similar collections and official publications. Two hours.

Dr. WHITCOMB :

10. *Recent Diplomatic History of Europe*.—With special reference to the *Eastern and Far-Eastern Questions* ; the origin of the Eastern question, and the causes that led to a territorial extension of the European Powers towards the East ; examination of treaties with a view to the explanation of existing international agreements ; complex problems involved in the political management of the Balkan peninsula. Transference of the international contest to the Orient, and struggle for the control of China. The division of Africa into areas of European possession and influence. European colonial systems. Two hours.

Assistant Professor ROWE :

11. *International Law*.—(1) *The Sources and Nature of International Law*.—The Jus Gentium of the Roman Law. Grotius and Puffendorf. America's contribution to international law during the present century. (2) *The Law of Peace*.—Doctrine of territorial sovereignty. Resulting legal equality of States. The European Concert and the primacy of the United States in American Affairs. Intervention, de facto States, and belligerent communities. (3) *The Law of War*.—Declaration of war and recognition of belligerency. The person and property of enemies on land and at sea. Treatment of non-combatants. Legitimate agents, instruments and methods of warfare. (4) *The Law of Neutrality*.—Meaning of neutrality. Rights and obligations as between belligerent and neutral States. Obligations of belligerent States towards neutral individuals. Blockade and contraband. Two hours.

## II.

## COMMERCE.

Assistant Professor E. R. JOHNSON :

5. *American Commerce and Commercial Relations*.—A survey of the general principles of commerce. History of American commerce, carrying trade and ship-building. History of the commercial treaties and commercial policy of the United States. Discussion of present questions of commercial policy. Lectures and reports accompanied by an outline with assigned and optional readings. Two hours.

14. *European Commerce and Commercial Relations*.—European commerce since the discovery of America considered with reference to the political and economic forces by which it has been controlled. Study of the commercial treaties and present commercial policy of the leading nations of Europe. Comparison of European commerce and commercial policy with the American. Lectures and reports accompanied by an outline with assigned and optional readings. Two hours.

III.

GOVERNMENT AND LAW.

Dr. YOUNG :

2. *Constitutional Law.—American Constitutional Law.*—A study of the theory and practical workings of the Federal Constitution. Recent changes and present tendencies. Required readings, lectures and leading cases. Two hours (*First Term*).

*European Constitutional Law.*—The Federal Constitutions of Switzerland and Germany. Comparisons with the American Constitution. Growth of the Federal form. Lectures and required readings. Two hours (*Second Term*).

Assistant Professor ROWE :

3. *Modern Legislative Problems.*—Relation of custom to legislation in ancient and modern times. Growth of power of legislative bodies. The American and Continental theories of government. Influence of a written constitution. The limitations on legislative power as illustrated in the police power, the power of taxation and the power of eminent domain. Consideration of the leading questions before the legislatures of modern countries.

Readings in Lowell's *Government and Parties in Continental Europe*, Bryce's *American Commonwealth*, Vol. II., and Wilson's *Congressional Government*. Two hours.

Mr. MIKELL :

8. *History of Law and Legal Concepts.*—The study of the development of the law of private property and the mutual rights and obligations of private persons. A non-technical discussion of private law with comparisons of the Common and Roman Law. Two hours.

IV.

COLONISATION AND COLONIAL ADMINISTRATION.

Dr. YOUNG :

13. *Government of Colonies and Dependencies.*—"Crown" colonies and colonies with representative government. Organisation of the most important dependencies of European States. Special attention is given to practical questions of colonial government, *e.g.*, the colonial civil service, the participation of natives in government, the effect produced by colonies on the home government, etc. Where the literature of the subject permits, modern experience is supplemented by references to Roman provincial administration. Two hours.

V.

ECONOMICS.

Assistant Professor SEAGER :

4. *Political Economy.*—A general course designed for beginners. During the second term special attention will be given to the practical economic problems of the day. Lectures and required readings in selected treatises. Two hours.

Professor PATTEN :

15. *Advanced Political Economy.*—This course is designed primarily as an introduction to social philosophy. Mill's *Political Economy* is used as a text-book. Each of the leading doctrines is traced through the various phases of its development until it assumes its final form in the writings of Mill. Two hours.

Associate Professor FALKNER :

8. *The Resources of the United States and of European Countries.—Lectures and Research.* A study of industrial conditions relating to agriculture, mining, manufacturing and cognate subjects by the statistical method on the basis of official documents. As far as possible an attempt will be made to study the position of the leading nations in the world's industry, and to indicate upon what natural and economic conditions their

place depends. The comparative method will be largely employed, and the economic conditions of the United States used as a background for the interpretation of foreign conditions. A special feature of the work will be the preparation by the students of reports on particular topics, which will be utilised as a basis of comment and instruction in the methods of research. Two hours.

Associate Professor FALKNER:

17. *The Resources of Tropical Countries*, including Asia and South America.—A course planned on the same lines as the foregoing. Two hours.

## VI.

### FINANCE AND BANKING.

Professor J. F. JOHNSON:

6. *Practical Finance and Foreign Exchange*.—This course treats of the mechanism of the money market, of foreign exchanges, and of the causes and effects of panics. Such topics as the following are discussed: conditions leading to ease or stringency in the loan markets; stock exchange operations in New York, London, Paris and Berlin; international payments and the flow of the precious metals; the coinage of leading countries and the par of exchange with the United States; the conditions regulating prices of foreign bills of exchange; method of settlement between gold standard and silver standard countries; the payment of the Franco-German indemnity; the panics of 1890 and 1893, with their effects on domestic industries and foreign trade. Two hours.

18. *Money and Banking* (Monetary Systems. International Aspects of Banking).—This course aims to give the student a firm grasp of the theory of money and credit, and an understanding of current monetary and banking problems in the principal countries of the world. Especial attention is given to the following topics: the banks of the United States; the Suffolk banking system; the national banking system; bimetallism; the variations in prices after 1850 and after 1873; and the defects of the present monetary system of the United States. This course will also treat of the production of gold and silver and its effect upon credit and prices, the money question in India, and monetary reform in Austria, Russia and Japan. Two hours.

Assistant Professor SEAGER:

16. *Public Finance*.—The subjects of public expenditures and public revenues with special reference to the United States. H. C. Adam's *Public Finance* will be used as a text-book, supplemented by lectures and reports on assigned topics. Two hours.

## VII.

### SOCIOLOGY.

Assistant Professor LINDSAY.

17. *Race Traits and Distribution*.—Ethnological principles and methods of sociological research. The relative numbers and geographical distribution of the various branches of the human race. Questions of race superiority and its causes; physical criteria and mental differences of races. Particular reference to the racial groups of Eastern Asia, Southern Africa, and to insular peoples in their relations with white colonists. The amalgamation of races and the problems of acclimatization of the white man in the tropics. Two hours (*First Term*).

## VIII.

### ENGLISH.

DR. CHILD and MR. QUINN.

9. *English Composition*.—Weekly exercises in popular and literary subjects assigned by the instructor, with special reference to the gathering and ordering of material. In the case of students pursuing this special course, particular attention is paid to expository composition, the preparation of briefs and reports, abstracts of public documents, of law cases and augmentation. One hour.

## APPENDIX L.

### UNIVERSITY OF CHICAGO : THE COLLEGE OF COMMERCE AND POLITICS.

CIRCULAR OF INFORMATION, 1890. (EXTRACT. See also p. 268.) WORK  
OF THE THIRD AND FOURTH YEARS (SENIOR COLLEGE.)

#### I. *Prescribed Courses.*

##### POLITICAL ECONOMY.—THREE MAJORS.

1. *Principles of Political Economy*.—Exposition of the laws of Political Economy in its present state.—Dunbar, *Banking*.

Five hours a week. Autumn Quarter : 8.30 and 9.30. Professor Laughlin and Assistant Professor Hill. Repeated in Spring Quarter : 12.0.

3. *Economic and Social History*.—Leading events in the Economic History of Europe and America since the middle of the Eighteenth Century.—Lectures and Reading. Spring Quarter : 2.0. Professor Miller.

18. *Public Finance*.—Public Expenditures. Theories and Methods of Taxation. Public Debts. Financial Administration. Autumn Quarter : 3.0. Professor Miller.

In this course it is intended to make a comprehensive survey of the whole field of public finance. The course is primarily planned to meet the wants of those students who do not propose to extend their studies in finance beyond one course. It is, at the same time, intended to form an introduction to the seminary work in future.

##### POLITICAL SCIENCE.—THREE MAJORS.

21. *Federal Constitutional Law of the United States*.—This course will examine the leading principles established by the decisions of the Supreme Court of the United States. Selected cases are studied in detail. Lectures are accompanied by a study of the leading commentaries. Winter Quarter : 11.30. Dr. Hatfield.

32. *Introduction to the Common Law*.—The sources of the common law. Elementary legal ideas, especially the rights of persons and property. Winter Quarter : 3.0. Assistant Professor Freund.

41. *The Elements of International Law*.—Autumn Quarter : 9.30. Professor Judson.

##### HISTORY.—TWO MAJORS.

12. *Europe in the Nineteenth Century*.—The History of Europe from the Vienna Congress to recent times. Spring Quarter : 3.0. Dr. Schwill.

18. *Recent American History*.—The Civil War and Reconstruction. Spring Quarter : 12.0. Assistant Professor Shepardson.

##### SOCIOLOGY.—ONE MAJOR.

79. *Sociological Conception of Society*.—Considered with reference to the nature and processes of politics. Autumn Quarter : 2.0. Professor Small.

#### II. *Elective Courses.*

Nine Majors of work in the Senior College of Commerce and Politics are elective.

Students who complete the work of the College of Commerce and Politics will be given the degree of Bachelor of Philosophy. This degree leads to the advanced work of the graduate school, and to the degrees of Master and Doctor of Philosophy.



## APPENDIX M.

## UNIVERSITY OF WISCONSIN.

## SCHOOL OF COMMERCE.

BULLETIN No. 35. MARCH, 1900. (EXTRACT.)

ACADEMIC YEAR, 1900-1901.

First Semester opens September 26, closes February 9.

Christmas Recess, December 22 to January 1, inclusive.

Second Semester opens February 11, closes June 20.

Easter Recess April 11 to 15, inclusive.

Commencement, Thursday, June 20.

The next Academic Year of the University opens September 25, 1901.

## STAFF OF INSTRUCTION.\*

Charles Kendall Adams, LL.D., *President of the University.*William A. Scott, Ph.D., *Director and Professor of Economic History and Theory.*

(Economic History, Money and Banking.)

† ———, *Professor of Commerce.*

(Consular and Diplomatic Service and Materials of Commerce.)

Robert M. Bashford, A.M., LL.B., *Professor of the Law of Private Corporations and Commercial Law.*

(Commercial Law.)

Andrew A. Bruce, A.B., LL.B., *Assistant Professor of Law.*

(The Law of Agency and Carriers.)

Edwin E. Bryant, *Dean of the College of Law.*

(Private International Law.)

Storm Bull, M.S., *Professor of Steam Engineering.*

(Generation and Transmission of Power.)

Victor Coffin, Ph.D., *Assistant Professor of European History.*

(Modern European and Nineteenth Century History.)

William W. Daniells, Sc.D., M.S., *Professor of Chemistry.*

(Chemistry.)

Richard T. Ely, *Director of School of Economics and Political Science and Professor of Political Economy.*

(Public Finance.)

William F. Giese, A.M., *Assistant Professor of Romance Languages.*

(French and Spanish.)

Charles N. Gregory, A.M., LL.B., *Professor of Criminal Law, the Law of Contracts, of Sales, and of Probate.*

(Law of Contracts and Sales.)

Charles H. Haskins, Ph.D., *Professor of European History.*

(Mediaeval History.)

Frank G. Hubbard, Ph.D., *Professor of the English Language.*

(English.)

John B. Johnson, C.E., *Dean of the College of Engineering and Professor of Engineering.*

(Materials of Construction.)

Edward D. Jones, Ph.D., *Assistant Professor of Economics and Commercial Geography.*

(Economic Geography and Statistics.)

Frederick W. Meisnet, B.S., *Instructor in German.*

(German.)

Balthasar H. Meyer, Ph.D., *Assistant Professor of Sociology.*

(Transportation, History of Commerce and Insurance.)

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\* The following list is provisional, and is subject to modification and extension before the opening of the school.

† This chair will be filled before the opening of the school.

Edward T. Owen, A.B., *Professor of the French Language and Literature.*  
(Spanish.)

John B. Parkinson, A.M., *Professor of Constitutional and International Law.*

(International Law, Constitutional Law.)

Paul S. Reinsch, Ph.D., *Assistant Professor of Political Science.*  
(Elementary Law.)

William H. Rosenstengel, A.M., *Professor of the German Language and Literature.*

(German.)

Benjamin W. Snow, Ph.D., *Professor of Physics.*  
(Physics.)

Frederick J. Turner, Ph.D., *Director of the School of History and Professor of American History.*

(American History, Social and Economic History of the United States, History of the West.)

Samuel E. Sparling, Ph.D., *Instructor in Administration.*

(Business Organisation and Management and Public Administration.)

#### PURPOSE OF THE SCHOOL.

The purpose of this school is to supply facilities for the training of young men who desire to enter business careers, especially in such fields as domestic and foreign commerce and banking, or branches of the public service, like the consular, in which a knowledge of business is essential.

#### REQUIREMENTS FOR ADMISSION.

Students will be admitted to this school on the same conditions as those imposed for entrance to the Civic Historical, General Science, Modern Classical, or Engineering Courses of the College of Letters and Science.

The requirements for admission to these courses include two years successful study of some modern language other than English, and in general cover the subjects included in the curricula of accredited four-year High Schools in this and adjoining states. Students prepared to enter the English Course of the College of Letters and Science will be admitted to this school on condition that they make up the equivalent of two years preparatory study of some modern foreign language. A detailed statement of the requirements for admission to these courses may be found on pages 59-65, of the general catalogue of the University. The following indicates the various methods of gaining admission :—

1. By passing the examinations for entrance as described in the catalogue.
2. By certificate of graduation from an accredited school. The list of such schools will be found in the catalogue.
3. By certified standing or diploma of graduation from a state normal school.
4. By presentation of evidence of satisfactory scholarship and character from a college or university at which the candidate has been in attendance.

Persons twenty-one years of age who are not candidates for a degree and who wish to take special studies are permitted to enter as adult special students upon giving satisfactory evidence that they are prepared to profit by the courses desired.

Students who have completed the freshman year in any of the courses of the College of Letters and Science in the University of Wisconsin or in any other institution of similar grade may be admitted to the sophomore year of this school, provided they make up the required work of the freshman year which they have not had. Transfers of students in the junior and senior years of the College of Letters and Science to the correspondin

years in this school will not be practicable. Transfers, however, will always be permitted on condition that all the work required of students in the School of Commerce be made up before graduation.

Students who have satisfied all the requirements for entrance, but who do not wish to be candidates for the degree, will be admitted to any of the courses of this school for which they are properly prepared. Many of the courses of this school will also be open to the election of students in other departments of the University.

#### PLAN OF THE COURSE OF STUDY.

The studies of the school will be described in three groups :—

I. Those required of all students no matter what business they desire to enter.

II. Specially arranged and correlated electives leading to the particular business which the student intends to enter.

III. Free electives chosen for the purposes of general culture.

#### I. REQUIRED STUDIES.

The courses belonging to this group are of three sorts :—

(a) Those needed as a foundation or preparation for more technical courses which are to follow. Under this head fall the courses in Trigonometry, Chemistry, Physics, Mediæval, Modern, and American History, and Economic Geography. Trigonometry is needed in the study of Physics; Chemistry is essential to the study of the Materials of Commerce and their Adulterations; and Physics lays the foundation for the study of the Generation and Transmission of Power, Materials of Construction, etc. The courses in History and Economic Geography are essential to the successful study of the subjects enumerated under (b), and they are also of direct practical advantage in extending the student's horizon and in giving him such an acquaintance with the national habits and characteristics and such skill in the interpretation of men and events as are essential to the highest success in business.

Group (b) includes a number of courses designed to acquaint the student with the structure of the business and commercial world, and with the methods of conducting modern business enterprises. Under this head fall the courses in the Industrial History of England, the History of Commerce, Social and Economic Legislation, including tariff laws, consular regulations, labour laws, etc.; Transportation, Banking and the Mechanism of Exchange; Business Organisation and Management; Commercial Law; and Economics.

The studies belonging to group (c) are as essential to the general equipment of the business man, no matter what particular branch of business he pursues, as those mentioned under (a) and (b). It includes German, French, and Spanish. In one of these languages at least, and in two, if the student desires and possesses the requisite ability, he must acquire such facility in reading, speaking and writing as will enable him successfully to conduct business in the countries in which the language he has learned is spoken. It includes also a series of graded courses in the study of English, designed to enable the student to use his mother tongue fluently and correctly. It includes also a course in the Generation and Transmission of Power, designed to give the business men who graduate from this school a knowledge of the natural sources and limitations of water, steam, and electric power, and of the important place which these physical agencies occupy in the successful conduct of business enterprises. The course in the Materials of Commerce, which is required of all students, is designed to be a laboratory course conducted with the aid of a well-equipped Commercial Museum, which the University hopes to be able to provide in the near future. Such a museum should contain properly labelled and described samples of the

principal raw materials and manufactured products entering into the commerce of the world and of their various forms of adulteration, and this course is designed to give each student a knowledge of those materials which enter into the business he expects to follow, and a degree of skill in detecting adulterations and shoddy.

## II. TECHNICAL ELECTIVES.

So far as the resources of the school will permit, these studies will be so arranged as to meet the needs of individual students. For example, a young man who wishes to enter the consular service will be given courses in Public and Private International Law, Statistics, Administration, History of Diplomacy, Modern Languages, the special duties of consular officers, etc.; one wishing to enter a special branch of manufacture, so far as the resources of the school will permit, will be given an opportunity to study the nature of the raw materials used in that industry, the sources from which they may be obtained, their cost, the present distribution and state of that industry throughout the world, the chief markets for the product, the methods peculiar to that particular business, etc., etc. A student wishing to engage in the commerce of our new West Indian possessions, will be given an opportunity to learn to read, write, and speak the Spanish language, and to study the physical resources and the industries of those islands, their political and commercial history, the laws and customs of the people, as well as the methods and peculiarities of the particular branch of commerce he expects to enter. A student wishing to become a banker will be given courses in the technique of banking, foreign exchanges, investments, the laws relating to commercial paper, the history of banking in the important countries of the world, technical banking problems, etc. It is the design of the school, to the extent that its resources will permit, to secure as instructors in these technical and special subjects, men who are specialists and who know by actual experience the subjects they teach.

For the coming year the school is prepared to offer the following subjects as electives:—Materials of Construction, Insurance, Consular Service, Spanish, French, Italian, German, Public Finance, Statistics, Administration, International Law, Constitutional Law, Economics, Geology, Mineralogy, Nineteenth Century History, Social and Economic History of the United States, or History of the West. The authorities of the University expect to be able largely to increase this list along the lines of technical subjects when the school is in actual operation and the needs of the students are revealed. With the resources at present available it will be possible to organise technical courses other than those above enumerated if there is a sufficient demand for them.

## III. FREE ELECTIVES.

A limited number of free electives from the large number of courses given in the other departments of the University will be allowed students in this school. The exact number will necessarily vary according to individual needs. Each student will be required to pursue the technical courses offered for his particular purposes, but he will be allowed to complete his programme with free electives.

## ARRANGEMENT OF STUDIES.

The arrangement of studies for the Academic Year 1900-1901 will be as follows: (The figures indicate number of hours per week.)

### *Freshman Year.*

*First Semester:* Economic Geography, 2; Economic History of England, 2; German, French, or Spanish, 4; Physics, 3; English, 3; Trigonometry, 2; Drill and Gymnastics, 2.

*Second Semester:* Economic Geography, 2; Language continued, 4; American History, 4; English, 3; Physics, 3; Drill and Gymnastics, 2.

*Sophomore Year.*

*First Semester:* History of Commerce, 2; Mediæval History, 3; Language continued, 2; Chemistry, 4; English, 2; Elective, 3; Drill and Gymnastics, 2.

*Second Semester:* Business Organisation and Management, 2; Elementary Economics, 3; Modern History, 3; Language continued, 2; Chemistry, 4; Elective, 2; Drill and Gymnastics, 2.

*Junior Year.*

*First Semester:* Commercial Law, 3; Transportation, 2; Language\* continued, 2; Nineteenth Century History, 3; Elective 8.

*Second Semester:* Money and Banking, 3; Transportation, 2; Language\* continued, 2; Generation and Transmission of Power, 3; Elective, 8.

*Senior Year.*

*First Semester:* Social and Economic Legislation, including tariff laws, consular regulations, labour laws, etc.\*, 3; Materials of Commerce,\* 3; Language continued,\* 2; Thesis, 2; Elective, 8.

*Second Semester:* Social and Economic Legislation,\* 3; Materials of Commerce,\* 3; Language continued,\* 2; Thesis, 2; Elective 8.

**SPECIAL LECTURERS.**

A number of special lecturers will be provided for the purpose of acquainting students with present business conditions and opportunities. So far as possible men representing the chief business enterprises of the United States will be secured for this purpose.

**REQUIREMENTS FOR GRADUATION AND DEGREE.**

Students who have successfully completed the above course of study and who have in addition satisfied the faculty of the school that they possess a good working knowledge of Bookkeeping and Accounts, will be admitted to graduation, and will receive diplomas conferring upon them the degree of Bachelor of Commercial Science.

**CHARGES AND FEES.**

All fees are required to be paid strictly in advance at the beginning of each semester before cards are issued by the class officer entitling the student to admission to classes.

Tuition is free for all students from the State of Wisconsin.

After ten days from the beginning of the semester no fees are returned except by special vote of the Board of Regents.

Tuition for non-resident students, per semester ..... \$15.00  
Incidental fee for all students, per semester ..... 10.00

Communications respecting this school should be addressed to W. D. Hiestand, Registrar, or to William A. Scott, Director.

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**APPENDIX N.**

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**UNIVERSITY OF VERMONT.**

**DEPARTMENT OF COMMERCE AND ECONOMICS. (1900.)**

In harmony with an educational movement which is in progress in the leading Institutions of the United States and Great Britain, the Trustees of the University of Vermont have organized a Department of Commerce and Economics. The coming century promises to be one of great industrial and commercial enterprise, and presents at once a demand and an opportunity for men of trained business ability. While native endowments and

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\* Not given in 1900-1901.

practical experience will always be leading features in business success, it is believed that in the sharper competitions of the future a decided advantage will accrue to those who have had a training wisely adapted to secure those qualities and habits, mental and moral, which promote business efficiency.

The demands and opportunities presented by a greatly enlarged and improved public service also call for an adaptation of educational methods to these new conditions.

As this department is a new one in our Universities, we shall endeavour to learn gradually and by careful study and experience, what course, or courses, will best accomplish the end in view. But the plan which naturally suggests itself is to lay a broad basis of thorough training in English, the modern languages, the mathematics, history, political and social science, and to add specialized courses in economics, commercial geography, commercial law, the history of industrial development, statistics, and to some extent the details of industrial and business operations and methods, such as book-keeping, banking and financiering.

### REQUIREMENTS FOR ADMISSION.

Students will be admitted to the Freshman year as candidates for this course who have successfully pursued the studies included in the curricula of accredited four-year High Schools in the New England States. These studies must in all cases embrace either four years of Latin, or four years of French and German, or two years of Latin and two years of either French or German. Students graduating from the English Course in High Schools may make up as an extra study in college, the equal of two years of preparation in the modern languages.

### COURSE IN COMMERCE AND ECONOMICS.

The following course, which is tentatively proposed, and is subject to modification, extends over the Junior and Senior years. The course is also open to those who have successfully completed for two years any of the courses in the University of Vermont (or their equivalents in other institutions) which include French, German and History. On the successful completion of the course, and the satisfaction of the other requirements for graduation, the candidate will receive a Baccalaureate degree with a certificate of proficiency in this department.

#### Junior Year.

#### SIXTEEN HOURS A WEEK, MADE UP OF REQUIRED AND ELECTIVE STUDIES.

Required.					Elective.				
Economics	-	-	-	3	History	-	-	-	3
Modern Languages	-	-	-	3	Logic	-	-	-	3
English	-	-	-	2	Mathematics	-	-	-	3
American Civil Institutions	-	-	-	3	Physics	-	-	-	4
Accounting	-	-	-	3	Sociology	-	-	-	3

#### Senior Year.

#### SIXTEEN HOURS A WEEK.

Required.					Elective				
Economics	-	-	-	3	History	-	-	-	3
Constitutional Law	}	-	-	2	Sociology	-	-	-	3
Comparative Politics		-	-	2	Commercial Law	-	-	-	2
International Law	-	-	-	2	Modern Languages	-	-	-	3
Banking	-	-	-	2					
English	-	-	-	1					

Students in this department are strongly advised to take as electives one of the Physical Sciences, in order to become acquainted with the method of modern science, for one year ; and a course of history for one year.





APPENDIX O.

HARVARD UNIVERSITY, FACULTY OF ARTS AND SCIENCES.  
DIVISION OF HISTORY AND POLITICAL SCIENCE  
DEPARTMENT OF ECONOMICS (EXTRACT JUNE 1901.)<sup>†</sup>  
ECONOMICS.

- Eugene Wambaugh, LL.D., *Professor of Law*, 29, Hammond St.  
Frank William Taussig, LL.B., Ph.D., *Professor of Political Econom*  
[Absent in 1901-02], 2, Scott St.  
William James Ashley, A.M., *Professor of Economic History*, and,  
*Chairman of the Department of Economics*.<sup>\*</sup>  
Charles Jesse Bullock, Ph.D. (Assistant Professor of Economics and  
Sociology at Williams College) *Instructor in Economics*.  
William Franklin Willoughby, A.B., *Instructor in Economics*.  
Thomas Nixon Carver, Ph.D., *Assistant Professor of Political Economy*  
75, Frost St.  
William Morse Cole, A.M., *Instructor in the Principles of Accounting*.  
Hugo Richard Meyer, A.M., *Instructor in Political Economy*, 1716,  
Cambridge St.  
Abram Piatt Andrew, Jr., Ph.D., *Instructor in Political Economy*. 10,  
Russell Hall.  
Oliver Mitchell Wentworth Sprague, Ph.D., *Instructor in Political  
Economy*, 21, Stoughton Hall.  
Bruce Wyman, A.M., *Lecturer on Suretyship and Mortgage*, 202, Craigie  
Hall.  
James Horace Patten, *Austin Teaching Fellow*, 7, Holyoke House.

GENERAL STATEMENT.

Course 1 is introductory to the other courses. It is intended to give a general survey of the subject for those who take but one course in Economics, and also to prepare for the further study of the subject in advanced courses. It is usually taken with most profit by undergraduates in the second or third year of their college career. Students who plan to take it in their first year are strongly advised to consult the instructor in advance. History 1 or Government 1, or both of these courses, will usually be taken to advantage before Economics 1.

The advanced courses divide themselves into two groups. The first group contains Courses 2, 3, 13, 14, 15, which are concerned chiefly with economic and social theory. Courses 2 and 15 follow the development of economic theory from its beginnings to the present time, with critical examination of the conclusions reached by economists of the past and the present. Course 13, on scope and method in economic investigation, continues the same subjects; it is taken to best advantage after either 2 or 15. Course 3 considers the wider aspects of economic and social study, and reviews the progress of sociological inquiry. Course 14 takes up the history and literature of socialistic and communistic proposals, and leads to a discussion of the foundations of existing institutions.

The second group contains the remaining courses, which are of a more descriptive and historical character. In all of them, however, attention is given to principles as well as to facts, and some acquaintance with the outlines of economic theory is called for.

Before taking any of the advanced courses, students are strongly advised to consult with the instructors. Courses 13, 15, 16, 18, 19, 21, may not be taken without the previous consent of the instructors. It is advised that Course 1 be taken in all cases as a preparation for the advanced courses; but some of them may be taken without this preparation. The conditions of admission to the several courses are stated below in the detailed descriptions.

<sup>\*</sup> Now Professor in the University of Birmingham.

<sup>†</sup> See especially the section on Courses preparing for a Business Career, p. 284 below.

The Seminary in Economics, and the courses allied with it are intended primarily for Graduate Students: but seniors in Harvard College, who have had adequate training in the subject, may be admitted.

The attention of students who look forward to a business career, and who have already taken Course 1, is called to Courses 5, 6, 7, 8, 9, 9a, 11, 16, and 17. In addition, Courses 18, 19 and 21, are offered with special view to their usefulness in preparing for a business career. Of these courses something more is said below, at page 384.

#### PRIMARILY FOR UNDERGRADUATES.

**Outlines of Economics.**—Lectures on Social Questions and Monetary Legislation. Mon., Wed., Fri., at 9. Drs. Andrew and Sprague, and Messrs. Beardsley and Patten.

Course 1 gives a general introduction to economic study, and a general view of Economics for those who have not further time to give to the subject. It undertakes a consideration of the principles of production, distribution, exchange, money, banking and international trade. Social questions and the relations of labour and capital, and the recent currency legislation of the United States, will be treated in outline.

Course 1 will be conducted partly by lectures, partly by oral discussion in sections. A course of reading will be laid down, and weekly written exercises will test the work of students in following systematically and continuously the lectures and the prescribed reading. Large parts of Mill's "Principles of Political Economy," of Walker's "Political Economy" (advanced course), and of Dunbar's "Theory and History of Banking" will be read; and these books must be procured by all members of the Course.

#### FOR UNDERGRADUATES AND GRADUATES.

**2. Economic Theory.** Mon., Wed., Fri., at 2.30. Asst. Professor Carver.

Course 2 is intended to acquaint the student with some of the later developments of economic thought, and at the same time to train him in the critical consideration of economic principles and the analysis of economic conditions. The exercises are accordingly conducted mainly by the discussion of selected passages from the important writers; and in this discussion the students are expected to take an active part. Lectures are given at intervals outlining the present condition of economic theory and some of the problems which call for theoretical solution. Theories of value, diminishing returns, rent, wages, interest, profits, the incidence of taxation, the value of money, international trade, and monopoly price, will be discussed. Marshall's "Principles of Economics," Böhm-Bawerk's "Positive Theory of Capital," Tausig's "Wages and Capital," and Clark's "Distribution of Wealth" will be read and criticised.

Course 2 is open to students who have passed satisfactorily in Course 1.

**3. Principles of Sociology.**—Theories of Social Progress. Mon., Wed., and (at the pleasure of the instructor) Fri., at 1.30. Asst. Professor Carver.

Course 3 begins with a study of the structure and development of society as outlined in the writings of Comte and Spencer. This is followed by an analysis of the factors and forces which have produced modifications of the social structure and secured a greater degree of adaptation between man and his physical and social surroundings. The relation of property, the family, the competitive system, religion, and legal control to social well-being and progress are studied with reference to the problem of social improvement. Spencer's "Principles of Sociology," Bagehot's "Physics and Politics," Ward's "Dynamical Sociology," Giddings's "Principles of Sociology," Patten's "Theoretic Social Forces," and Kidd's "Social

Evolution," are each read in part. Lectures are given at intervals, and students are expected to take part in the discussion of the authors read and the Lectures delivered.

Course 3 is open to students who have passed satisfactorily in Course 1.

\*14<sup>1</sup>/<sub>2</sub>f. Socialism and Communism. Half course (first half-year). Tu. Th., at 1.30. Asst. Professor Carver.

Course 14 begins with an historical study of socialistic and communistic writing and agitation. This is followed by a critical examination of socialistic theories as presented in the works of representative socialists. The purpose is to get a clear understanding of the economic reasoning that lies at the base of socialistic contentions and of the economic and social conditions which make such reasoning acceptable to socialists. Attention will be given largely to the reading of Marx's "Capital," but parts of the writings of other expounders of socialism will also be read.

Course 14 is open to those who have passed satisfactorily in Course 1 ; but it is to the advantage of students to take or to have taken either Course 2 or Course 3.

[10. The Mediæval Economic History of Europe. Tu., Th., and (at the pleasure of the instructor) Sat., at 12. Professor Ashley.

Omitted in 1901-02.

The object of this course is to give a general view of the economic development of society during the Middle Ages. It will deal, among others, with the following topics: the manorial system in its relation to mediæval agriculture and serfdom ; the merchant guilds and the beginnings of town life and of trade ; the craft-guilds and the guild-system of industry, compared with earlier and later forms ; the commercial supremacy of the Hanseatic and Italian merchants ; and the break-up of the mediæval organization of social classes.

Special attention will be devoted to England, but that country will be treated as illustrating the broader features of the economic evolution of the whole of western Europe ; and attention will be called to the chief peculiarities of the economic history of France, Germany, and Italy.

Students will be introduced in this course to the use of the original sources, and they will need to be able to translate easy Latin.

It is desirable that they should already possess some general acquaintance with mediæval history, and those who are deficient in this respect will be expected to read one or two supplementary books, to be suggested by the instructor. The course is conveniently taken after, before, or in conjunction with History 9 ; and it will be of especial use to those who intend to study the law of Real Property. It is open to those who have passed satisfactorily either in History 1 or in Economics 1.

[11. The Modern Economic History of Europe (From 1500). Tu., Th., and (at the pleasure of the instructor) Sat., at 12. Professor Ashley.]

Omitted in 1901-02.

This course—which will usually alternate with Course 10 in successive years—while intended to form a sequel to Course 10, will nevertheless be independent, and may be usefully taken by those who have not followed the history of the earlier period. The main thread of connection will be found in the history of trade ; but the outlines of the history of agriculture and industry will also be set forth, and the forms of social organization dependent upon them. England, as the first home of the "great industry," will demand a large share of attention ; but the parallel or divergent economic history of the great countries of western Europe will be considered side by side with it.

Course 11 is open to those who have passed satisfactorily either in History 1 or Economics 1.

The Economic Organization and Resources of European Countries. Tu., Th., and (at the pleasure of the instructor) Sat., at 12. Professor Ashley.

The course will begin with a survey of the physical geography and of the distribution of population and wealth in Europe as a whole, in order to explain (1) the relative position at present of agriculture in its various forms on the one side and mining and manufacture on the other, and (2) the presence in their several localities of the chief industries. The great countries—Great Britain and Ireland, France, Germany, Austria-Hungary, Russia and Italy—will then be taken in order, and a statement will be made (1) of their natural resources, and (2) of the manner in which these are utilized. Under the latter head will be considered such topics as the following: The investment of capital, the forms of business organization, the means of transportation, the relations between private enterprise and governmental stimulus and control, and the character and supply of labour. Returning, then, to Europe as a whole, attention will be directed to the points at which the interests of the several countries appear to conflict, and to the attempts to remove or mitigate the antagonism by international agreements—as, for instance, in the matters of customs tariffs, bounties, and labour legislation. Finally, a survey will be made of the main lines of transportation for commodities between one country and another and between Europe and the rest of the world, and of the economic effects of recent changes in this regard.

Course 17 is open to those who have passed satisfactorily either in History 1 or in Economics 1.

**6. The Economic History of the United States.** Tu., Th., at 2.30. Dr. Sprague and Mr. Patten.

Course 6 gives a general survey of the economic history of the United States from the close of the eighteenth century to the present time, and aims to show on the one hand the mode in which economic principles are illustrated by American experience and, on the other, the extent to which economic conditions have influenced social and political development. The following are among the subjects considered: aspects of the Revolution, and commercial relations during the Confederation and the European wars; the history of the protective tariff policy and the growth of manufacturing industries; the settlement of the West and the history of transportation, including the early canal and turnpike enterprises of the states, the various phases of railway building and the establishment of public regulation of railways; the development of corporations and the formation of industrial combinations; various aspects of agrarian history, such as the public land policy, the growth of foreign demand for American produce and the subsequent competition of other sources of supply, certain social topics, such as slavery and its economic basis, emancipation and the present condition of the Negro, the effects of immigration. Finally, the more important features of our currency and financial history are reviewed. Comparisons will be made from time to time with the contemporary economic history of Europe.

The course is taken advantageously with or after History 13. It is open to students who take Economics 1, and also to Juniors and Seniors who are taking that course.

**9<sup>th</sup>. The Labour Question in Europe and the United States.** Half-course (second half year) Tu., Th., Sat., at 10. Mr. Willoughby.

Course 9 is chiefly concerned with problems growing out of the relations of labour and capital in the United States and European countries. There is careful study of the methods of industrial remuneration—the wages system, profit sharing, sliding scales and collective bargaining; of the various forms of co-operation, of labour organizations, of factory legislation and the legal status of labourers and labour organizations, of state and private efforts for the prevention and adjustment of industrial disputes, of employers' liability and compulsory compensation acts, of the



insurance of working men against accidents, sickness, old age, and invalidity; of provident institutions, such as savings banks, friendly societies and fraternal benefit orders; of the problem of the unemployed.

While the treatment will necessarily be descriptive to a considerable extent, the emphasis will be laid on the interpretation of the movements considered with a view to determining their causes and consequences, and the merits, defects, and possibilities of existing reform movements.

A systematic course of reading will be required, and topics will be assigned for special investigation.

The course is open not only to students who have taken Course 1, but to Juniors and Seniors who are taking Course 1.

*9<sup>th</sup>hf.* Problems of Industrial Organization. Half course (second half year). Mon., Wed., Fri., at 9. Mr. Willoughby.

This course will give a critical study of modern industry with special reference to the efficiency of production and the relations existing between employers and employees. The actual organization of industrial enterprises will first be considered. Under this head will be treated such subjects as corporations, the factory system, the concentration and integration of industry, and the trust problem in all its phases. Following this, or in connection with it, will be studied the effect of the modern organization of industry, and changes now taking place, upon efficiency of production, stability of employment, and industrial depressions. Careful attention will be given to the relations existing between employers and employees, and the functions of organizations of both classes. Finally will be considered the position of the individual under the present system — his preparation for a trade through apprenticeship, technical education, or otherwise; his opportunities for advancement; his economic independence. Conditions in Europe as well as in the United States will be shown.

Topics will be assigned for special investigation, and the results of such inquiries will be considered in class.

This course is open to students who have taken Course 1, and it is desirable that they shall have taken Course 9 as well.

*4<sup>th</sup>f.* Statistics. — Theory, method, and practice. Half-course. Fri., at 11. Professor Ashley

After a brief history of statistics, this course will proceed to an exposition of the statistical methods most commonly employed, and a statement of the theoretical considerations most deserving of attention in practical investigation. An account, with running comment, will then be given of the work of government offices; and the latter part of the year will be employed in the disentangling and comparison of the main results of the recent industrial censuses of Germany and France. Two reports on assigned topics will be required during the year, from every student in the course.

Course 4 is open to students who have taken Economics 1; and it is also open to Juniors and Seniors who are taking Economics 1.

*5<sup>th</sup>hf.* Railways and other Public Works, under Public and Corporate management. Half-course (first half year). Tu., Th. and (at the pleasure of the instructor) Sat., at 1.30. Mr. Meyer.

In this course it is proposed to review the history and working of different modes of dealing with railway transportation, and to deal primarily with the questions of street railways, water, gas, and electric light supply. Consideration will be given to the economic characteristics of these industries, the theory and history of railway rates, the effects of railway service and railway charges on other industries, the causes and consequences of monopoly conditions. The history of legislation in the more important European countries and in Austria will be followed, as well as the different modes in which the countries in question the regulation and control of private corporations.



**The Economic Organization and Resources of European Countries.**  
 Tu., Th., and (at the pleasure of the instructor) Sat., at 12. Professor Ashley.

The course will begin with a survey of the physical geography and of the distribution of population and wealth in Europe as a whole, in order to explain (1) the relative position at present of agriculture in its various forms on the one side and mining and manufacture on the other, and (2) the presence in their several localities of the chief industries. The great countries—Great Britain and Ireland, France, Germany, Austria-Hungary, Russia and Italy—will then be taken in order; and a statement will be made (1) of their natural resources, and (2) of the manner in which these are utilized. Under the latter head will be considered such topics as the following: The investment of capital, the forms of business organization, the means of transportation, the relations between private enterprise and governmental stimulus and control, and the character and supply of labour. Returning, then, to Europe as a whole, attention will be directed to the points at which the interests of the several countries appear to conflict, and to the attempts to remove or mitigate the antagonism by international agreements—as, for instance, in the matters of customs tariffs, bounties, and labour legislation. Finally, a survey will be made of the main lines of transportation for commodities between one country and another and between Europe and the rest of the world, and of the economic effects of recent changes in this regard.

Course 17 is open to those who have passed satisfactorily either in History 1 or in Economics 1.

**6. The Economic History of the United States.** Tu., Th., at 2.30.  
 Dr. Sprague and Mr. Patten.

Course 6 gives a general survey of the economic history of the United States from the close of the eighteenth century to the present time, and aims to show on the one hand the mode in which economic principles are illustrated by American experience and, on the other, the extent to which economic conditions have influenced social and political development. The following are among the subjects considered: aspects of the Revolution, and commercial relations during the Confederation and the European wars; the history of the protective tariff policy and the growth of manufacturing industries; the settlement of the West and the history of transportation, including the early canal and turnpike enterprises of the states, the various phases of railway building and the establishment of public regulation of railways; the development of corporations and the formation of industrial combinations; various aspects of agrarian history, such as the public land policy, the growth of foreign demand for American produce and the subsequent competition of other sources of supply, certain social topics, such as slavery and its economic basis, emancipation and the present condition of the Negro, the effects of immigration. Finally, the more important features of our currency and financial history are reviewed. Comparisons will be made from time to time with the contemporary economic history of Europe.

The course is taken advantageously with or after History 13. It is open to students who take Economics 1, and also to Juniors and Seniors who are taking that course.

**9<sup>th</sup>hf. The Labour Question in Europe and the United States.** Half-course (second half-year) Tu., Th., Sat., at 10. Mr. Willoughby.

Course 9 is chiefly concerned with problems growing out of the relations of labour and capital in the United States and European countries. There is careful study of the methods of industrial remuneration—the wages system, profit-sharing, sliding scales and collective bargaining; of the various forms of co-operation; of labour organizations; of factory legislation and the legal status of labourers and labour organizations; of state and private efforts for the prevention and adjustment of industrial disputes; of employer's liability and compulsory compensation acts; of the

insurance of working men against accidents, sickness, old age, and invalidity ; of provident institutions, such as savings banks, friendly societies and fraternal benefit orders ; of the problem of the unemployed.

While the treatment will necessarily be descriptive to a considerable extent, the emphasis will be laid on the interpretation of the movements considered with a view to determining their causes and consequences, and the merits, defects, and possibilities of existing reform movements.

A systematic course of reading will be required, and topics will be assigned for special investigation.

The course is open not only to students who have taken Course 1, but to Juniors and Seniors who are taking Course 1.

*9<sup>2</sup>ahf.* Problems of Industrial Organization. Half course (second half year). Mon., Wed., Fri., at 9. Mr. Willoughby.

This course will give a critical study of modern industry with special reference to the efficiency of production and the relations existing between employers and employees. The actual organization of industrial enterprises will first be considered. Under this head will be treated such subjects as corporations, the factory system, the concentration and integration of industry, and the trust problem in all its phases. Following this, or in connection with it, will be studied the effect of the modern organization of industry, and changes now taking place, upon efficiency of production, stability of employment, and industrial depressions. Careful attention will be given to the relations existing between employers and employees, and the functions of organizations of both classes. Finally will be considered the position of the individual under the present system—his preparation for a trade through apprenticeship, technical education, or otherwise ; his opportunities for advancement ; his economic independence. Conditions in Europe as well as in the United States will be shown.

Topics will be assigned for special investigation, and the results of such inquiries will be considered in class.

This course is open to students who have taken Course 1, and it is desirable that they shall have taken Course 9 as well.

*4hf.* Statistics. — Theory, method, and practice. Half-course. Fri., at 11. Professor Ashley

After a brief history of statistics, this course will proceed to an exposition of the statistical methods most commonly employed, and a statement of the theoretical considerations most deserving of attention in practical investigation. An account, with running comment, will then be given of the work of government offices ; and the latter part of the year will be employed in the disentangling and comparison of the main results of the recent industrial censuses of Germany and France. Two reports on assigned topics will be required during the year, from every student in the course.

Course 4 is open to students who have taken Economics 1 ; and it is also open to Juniors and Seniors who are taking Economics 1.

*5<sup>1</sup>hf.* Railways and other Public Works, under Public and Corporate management. Half-course (first half year). Tu., Th. and (at the pleasure of the instructor) Sat., at 1.30. Mr. Meyer.

In this course it is proposed to review the history and working of different modes of dealing with railway transportation, and to deal summarily with the questions of street railways, water, gas, and electric light supply. Consideration will be given to the economic characteristics of these industries, the theory and history of railway rates, the effects of railway service and railway charges on other industries, the causes and consequences of monopoly conditions. The history of legislation in the more important European countries and in Australia will be followed, as well as the different modes in which the countries in question have undertaken the regulation and control of private corporations, or have assumed direct

ownership, with or without management and operation. As to the United States, there will be a consideration of the modes of regulation, through legislation and through commissions, at the hands of the several states, and of the course of legislation by the federal government, concluding with a study of the working of the Interstate Commerce Act.

Written work, in the preparation of papers on assigned topics, will be required of all students in the course.

Course 5 is open to students who have taken Economics 1.

5<sup>2</sup> *h.f.* Railways and other Public Works (advanced course). Half-course (second half-year). Tu., Th., and (at the pleasure of the instructor) Sat., at 1.30. Mr. Meyer.

This course is a continuation of the preceding one. It makes a detailed study of certain of the more important questions discussed in the first half-year. Among those questions are: The accounts and finances of railroads and street railways, as illustrated in the reports and statements of important systems; the development of transportation methods in certain important railroad systems; some State Commissions and their action in specific cases; the decisions rendered by the Interstate Commerce Commission; and some further aspects of public ownership, especially in Germany.

Subjects will be assigned for special examination, and the third hour may be used for the presentation and discussion of the reports upon the subjects examined.

Course 5<sup>2</sup> is open to students who have passed satisfactorily in Course 5.

8. Money, Banking, and International Payments. Tu., Th., Sat., at 11  
Drs. Andrew and Sprague, and Mr. Meyer.

The first part of the year will be devoted to a general survey of currency legislation, experience, and theory. The course will begin with a history of the precious metals, which will be connected, in so far as possible, with the history of prices, and with the historical development of theories as to the causes underlying the value of money. The course of monetary legislation in the principal countries will be followed, with especial attention to its relation to the bimetallic controversy; but the experiences of various countries with paper money will also be reviewed, and the influence of such issues upon wages, prices, and trade examined. Some attention, moreover, will be given in this connection to the non-monetary means of payment and to the large questions of monetary theory arising from their use.

The second part of the course will begin with an historical account of the development of banking. Existing legislation and practice in various countries will be analysed and compared. The course of the money markets of New York, London, Paris, and Berlin will be followed during a series of months, and the various factors such as stock exchange operations and foreign exchange payments, which bring about fluctuations in the demand for loans and the rate of discount upon them, will be considered. The relations of banks to commercial crises will also be analysed, the crises of 1857 and 1893 being taken for detailed study.

The course will conclude with a discussion of the movement of goods, securities, and money, in the exchanges between nations and in the settlement of international demands. After a preliminary study of the general doctrine of international trade, it is proposed to make a close examination of some cases of payments on a great scale, and to trace the adjustments of imports and exports under temporary or abnormal financial conditions. Such examples as the payment of the indemnity by France to Germany after the war of 1870-71, the distribution of gold by the mining countries, and the movements of the foreign trade of the United States since 1879, will be used for the illustration of the general principles regulating exchanges and the distribution of money between nations.

Course 8 is open to students who have passed satisfactorily in Course 1. With the consent of the instructors, it may be taken by Seniors and Graduates as a half-course in either half-year.

**7a<sup>1</sup>hf.** Financial Administration. Half-course (first half-year). Mon., Wed., Fri., at 9. Professor Bullock (Williams College).

This course will deal with the methods by which governments have attempted to adjust expenditures to revenue, and will study the problems arising from the effort to secure popular control over this process. The budget systems of England, France, and Germany will first receive attention; and study will then be concentrated upon the budgetary methods of our federal government. So far as practicable, also, some consideration will be given to State and local budgets in the United States. The history and present form of our federal budget will offer a large field for investigation, and supply subjects for written reports. Students will be encouraged, furthermore, to gather information concerning the methods followed by State and local governments with which they may happen to be familiar. Candidates for Honours in Political Science or for the higher degrees may advantageously use reports thus prepared by them as material for theses.

Course 7a is open to students who have taken Economics 1.

**7b<sup>1</sup>hf.** The Theory and Methods of Taxation, with special reference to taxation in the United States. Half-course (first half-year). Tu., Th., Sat., at 10. Professor Bullock (Williams College).

In this course both the theory and practice of taxation will be studied. Attention will be given at the outset to the tax systems of England, France, and Germany; and the so-called direct taxes employed in those countries will receive special consideration. After this, the principles of taxation will be examined. This will lead to a study of the position of taxation in the system of economic science, and of such subjects as the classification, the just distribution, and the incidence of taxes. Finally, the existing methods of taxation in the United States will be studied, each tax being treated with reference to its proper place in a rational system of federal, state, and local revenues.

Written work will be required of all students, as well as a systematic course of prescribed reading. Candidates for Honours in Political Science and for the higher degrees will be given the opportunity of preparing theses in substitution for the required written work.

Course 7b is open to students who have taken Economics 1.

**16<sup>1</sup>hf.** Selected Topics in the Financial History of the United States. Half-course (first half-year). Tu., Th., at 2.30. Professor Bullock (Williams College).

The first object of this course will be to investigate the process through which a system of federal finance was developed in the United States. This will involve a study of the finances of the American colonies, a consideration of the experiences of the Confederation, and a detailed examination of the financial legislation of the first three decades following the adoption of the constitution. Incidentally, it will necessitate some study of colonial monetary affairs and of the theories of taxation prevalent in the eighteenth century. The second topic for investigation will be the development of the finances of the states from 1775 to 1850, with special reference to the growth of state debts and the history of the general property tax. The final topic will be the development of federal taxation since 1820, particular attention being given to the history of the internal revenue system during the last forty years.

Course 16 is open to students who have taken Economics 1, and who take or have taken History 13.

#### PRIMARILY FOR GRADUATES

**15.** The History and Literature of Economics, to the opening of the Nineteenth Century. Mon., Wed., and (at the pleasure of the instructor) Fri., at 12. Professor Ashley.

The course of economic speculation will here be followed, in its relation alike to the general movement of contemporary thought and to contempo-



rary social conditions. The lectures will consider the economic theories of Plato and Aristotle; the economic ideas underlying Roman law; the mediæval church and the canonist doctrine; mercantilism in its diverse forms; "political arithmetic"; the origin of the belief in natural rights and its influence on economic thought; the Physiocratic doctrine; the beginnings of academic instruction in economics; the work and influence of Adam Smith; the doctrine of population as presented by Malthus; and the Ricardian doctrine of distribution.

The lectures will be interrupted from time to time for the examination of selected portions of particular authors; and careful study will be given to portions of Plato's "Republic" and Aristotle's "Politics" (in translation), to Mun's "England's Treasure," Locke's "Consideration of the Consequences of the Lowering of Interest," certain "Essays" of Hume, Turgot's "Réflexions," and specified chapters of Adam Smith's "Wealth of Nations," Malthus' "Essay," and Ricardo's "Principles." Students taking the course are expected to procure the texts of the chief authors considered, and to consult the following critical works: Ingram, "History of Political Economy"; Cossa, "Introduction to the Study of Political Economy"; Cannan, "History of the Theories of Production and Distribution"; Bonar, "Philosophy and Political Economy"; Böhm-Bawerk, "Capital and Interest"; Taussig, "Wages and Capital."

Course 15 is open to those who have passed satisfactorily in Course 1. It is taken to advantage after Course 2, or contemporaneously with that Course.

13<sup>2</sup> *hf.* Methods of Economic Investigation. Half-course (second half year). Tu., Th., at 1.30. Asst. Professor Carver.

Course 13 will examine the methods by which the important writers of modern times have approached economic questions, and the range which they have given their inquiries; and will consider the advantage of different methods, and the expediency of a wider or narrower scope of investigation. These inquiries will necessarily include a consideration of the logic of social sciences. Cairnes' "Logical Method of Political Economy" and Keynes' "Scope and Method of Political Economy" will be carefully examined. At the same time selected passages from the writings of Mill, Jevons, Marshall, and the Austrian writers will be studied, with a view to analysing the nature and scope of the reasoning.

Course 13 is designed mainly for students who take or have taken Course 2 or Course 15; but it is open to mature students having a general acquaintance with economic theory.

#### COURSES PREPARING FOR A BUSINESS CAREER.

Among the courses described above, those on the industrial and financial phenomena of modern times are useful for students who propose to enter on a business career. Such are the courses on Money and Banking (18), Railways and other Public Works (5 and 5*a*), the Labour Question (9), the Economic History of the United States (6), and the Industrial Organisation and Resources of European Countries (17). In addition, the following courses are designed more particularly to aid in the understanding of the problems likely to be met in business life, and are arranged with special regard to the needs of those looking to such a career. They are primarily for students who have reached or approached the close of their general education.

18<sup>1</sup> *hf.* The Principles of Accounting. Half-course (first half-year). Mon., Wed., and (at the pleasure of the instructor) Fri., at 3.30. Mr. W. M. Cole.

This course is designed primarily for students who expect to enter a business career, and wish to understand the processes by which the earnings and values of industrial properties are computed. It is not intended to afford practice in book-keeping, but to give students a grasp of principles which shall enable them to comprehend the significance of accounts.

In order that students may become familiar with book-keeping terms and methods, a few exercises will be devoted to a brief study of the common systems of recording simple mercantile transactions. The chief work of the course, however, will be a study of the methods of determining profit, loss, and valuation. This will include an analysis of receipts, disbursements, assets, and liabilities, in various kinds of industry and a consideration of cost of manufacture, cost of service, depreciation and appreciation of stock and of equipment, interest, sinking funds, dividends, and the like. Published accounts of corporations will be studied, and practice in interpretation will be afforded. Attention will also be given to the functions and methods of auditors.

The instruction will be given by lectures, discussions, reading, and written work.

Course 18 is open to Seniors and Graduates who have taken Economics 1.

19<sup>2</sup> *hf.* A General View of Insurance. Half-course (second half-year) Mon., Wed., and (at the pleasure of the instructor) Fri., at 3.30 Professor Wambaugh.

This course deals with insurance as a business, and not as a branch of law. It begins with a discussion of the general purpose and economic value of insurance, and proceeds to topics of practical importance in marine, fire, and life underwriting, including the perils insured against, physical and moral hazard, applications, forms of policies, the duties of the various classes of agents, adjustment of losses, kinds of fraud, the elements of the mathematical calculations determining premiums, mutual and assessment policies, regulation by the public, and insurance by the public; and concludes with a survey of the history, literature, and recent statistics of the subject.

All students will be required to investigate assigned questions and to present their results orally or in writing.

Course 19 may not be counted for the degrees of A.B., or S.B. It is open to students who have taken Economics 1.

21. Principles of Law in their Application to Industrial Problems. Three times a week. Mr. Wyman.

Course 21 considers certain rules of the law governing the conduct of modern trade and the organisation of modern industry. The course is designed especially for students who mean to enter business life, and who wish to secure some contact with the law and some understanding of its methods, such as will be of service in a business career. As it deals with the course of adjudication and legislation on questions of special importance in the economic development of modern times, it will also be of advantage to those who wish to equip themselves for the intelligent discussion of questions having both legal and economic aspects.

In the one part of the course will be considered the law governing certain combinations of capital and of labour. It will be seen what contracts in restraint of trade are considered in violation of the common law, and what it has been attempted to prevent by statutes. It will also appear what action by such combination is held to be a tort at common law, and what it has been proposed to make so by legislation. It will further be discussed what combinations to control the market are crimes by common law and by statute. The limits to be placed upon competition in trade and the demarcation to be drawn between fraudulent and permitted dealing will be the final subject in this part of the course. The object will be at once to give the students training in the methods of legal reasoning, and to inform them regarding the main principles involved.

In the other part of the course will be considered the general question raised by the association of men for the carrying on of business. This will require a study of the main principles involved in the various forms of the corporation. The stress will be laid upon the conception of the association as an entity, and the liabilities and capacity of the officers and stockholders. It will be considered how far the industrial organism may be affected by judicial decision and by legislation; what tendencies



the seminar is held in the afternoon, and the members of the seminar are given the opportunity to discuss their researches and to present their papers. The seminar is held in the afternoon, and the members of the seminar are given the opportunity to discuss their researches and to present their papers.

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## APPENDIX B

### DARTMOUTH COLLEGE

#### THE AMOEFUCK SCHOOL OF ADMINISTRATION AND FINANCE 1900-1914

##### FACULTY

1. **WILLIAM H. HARRIS, D.D., LL.D., President.**
2. **JOHN H. HARRIS, A.M., LL.B., Professor of Law and Economics.**
3. **JOHN H. HARRIS, A.M., Professor of Mathematics and History.**
4. **JOHN H. HARRIS, A.M., Professor of Mathematics and History.**
5. **JOHN H. HARRIS, A.M., Professor of Mathematics and History.**
6. **JOHN H. HARRIS, A.M., Professor of Mathematics and History.**
7. **JOHN H. HARRIS, A.M., Professor of Mathematics and History.**
8. **JOHN H. HARRIS, A.M., Professor of Mathematics and History.**
9. **JOHN H. HARRIS, A.M., Professor of Mathematics and History.**
10. **JOHN H. HARRIS, A.M., Professor of Mathematics and History.**
11. **JOHN H. HARRIS, A.M., Professor of Mathematics and History.**
12. **JOHN H. HARRIS, A.M., Professor of Mathematics and History.**
13. **JOHN H. HARRIS, A.M., Professor of Mathematics and History.**
14. **JOHN H. HARRIS, A.M., Professor of Mathematics and History.**
15. **JOHN H. HARRIS, A.M., Professor of Mathematics and History.**
16. **JOHN H. HARRIS, A.M., Professor of Mathematics and History.**
17. **JOHN H. HARRIS, A.M., Professor of Mathematics and History.**
18. **JOHN H. HARRIS, A.M., Professor of Mathematics and History.**
19. **JOHN H. HARRIS, A.M., Professor of Mathematics and History.**
20. **JOHN H. HARRIS, A.M., Professor of Mathematics and History.**

NON-RESIDENT LECTURERS FOR THE YEAR 1900-1901.

- John Ordronaux, M.D., LL.D., New York, N.Y. (Lecturer on Investments.)  
 Thomas Lyman Greene, Manager of the Audit Company of New York, N.Y.  
 (Lecturer on the Principles of Railroad and Industrial Accounting as  
 applied to Financial and Operating Administration.)  
 Robert Archey Woods, A.B., Head of the South End House, Boston, Mass.  
 (Lecturer on Municipal Administration.)  
 Joseph Arend DeBoer, A.M., Actuary of the National Life Insurance  
 Company, Montpelier, Vt. (Lecturer on the Theory and Practice of  
 Life Insurance.)  
 Marshall Putnam Thompson, A.B., Boston, Mass. (Lecturer on the Legal  
 Conditions of International Trade.)  
 James Shirley Eaton, A.M., Statistician of the Lehigh Valley Railroad  
 Company, New York, N.Y. (Lecturer on the Theory and Practice of  
 Railroad Statistics.)

Under the terms of the Amos Tuck Endowment Fund, the gift by Mr. Edward Tuck of the Class of 1862, of the sum of three hundred thousand dollars as a memorial to his father, the Honourable Amos Tuck of the Class of 1835, and a Trustee of the College from 1857 to 1866, especial provision was made for the "establishment of additional professorships within the College proper or in graduate departments." In accordance with this provision of the endowment fund for additional instruction in undergraduate and graduate courses, and with the direct approval of the donor, the Trustees of Dartmouth College have created the Amos Tuck School of Administration and Finance. [Mr. Tuck has since given an additional sum of \$100,000 for a building.]

The courses of this school are designed to prepare men for those more modern forms of business which have become so exacting as to require the same quality of academic training as the older professions.

It is the aim to give :

*First*, A body of knowledge and principles applicable to any form of business organisation and management,—the training which is needed by the business man as such.

*Second*, A more special preparation for banking, insurance, and railroad service, as well as for domestic and foreign commerce, the diplomatic service and public administration.

*Third*, Such further teaching and training as will prepare men for journalism or for participation in civic affairs.

The courses appropriate to the three interests indicated are identical for the first year. In the second year, the principle of election is admitted to some extent.

*Among the more general subjects treated in the school are :*

- Political, Anthropological, and Economic Geography.
- Modern and Recent European and American History, as well as the History of the more important outlying States.
- Social Statistics and Demography.
- The Psychology of Social Life.
- American Constitutional and International Law.
- Economic Development of the United States since the Civil War.
- Modern Languages, embracing English, French, German, and Spanish.
- English Composition and Speaking.

*The more special subjects include :*

- Corporation Finance.
- Money Markets and Speculation.
- Industrial Resources and Industrial Organisation.
- Accounting and Auditing.
- Insurance.
- Investments.
- Practical Banking.

Transportation, including Railroad Service, Water Transportation, and Foreign Commerce.

Theory and Technique of Statistics, including Commercial Statistics. Commercial and Corporation Law.

Public Finance.

Public and Municipal Administration.

These courses will be arranged to suit the needs of the individual student. After the first year of required work, and in connection with the general courses of the second year already mentioned, such of the special courses outlined above will be assigned to each student as will best prepare him for his chosen work. Assignment of the special courses to the training for definite careers is made below, subject to such modification later as the best interests of the student may require.

#### *General Mercantile and Commercial Business*

Courses 1, 2, 3, and 4 in Business Organisation and Management.

Course 2 in Finance.

Course 1 in Accounting.

Course 3 (c) in Transportation.

Courses 5 and 6 in Law and Political Science.

#### *Banking.*

Courses 1, 2, and 3 in Finance.

Courses 1, 2, and 4 in Business Organisation and Management.

Course 1 in Accounting.

Course 3 (b) in Transportation.

Courses 5 and 6 in Law and Political Science.

#### *Railroad Service.*

Courses 1 and 4 in Business Organisation and Management.

Courses 1 and 2 in Accounting.

Courses 1, 2, and 3 in Transportation.

Courses 1 and 2 in Law and Political Science.

#### *Foreign Trade.*

Courses 2 and 3 in Business Organisation and Management.

Courses 3 and 4 in Transportation.

Courses 1 and 2 in Statistics.

Course 4 in Modern History.

Course 7 in Law and Political Science.

#### *Insurance.*

Course 1 in Insurance.

Courses 1 and 4 in Business Organisation and Management.

Course 2 in Finance.

Course 1 in Accounting.

Courses 1 and 2 in Statistics.

#### *Administration.*

Course 1 in Administration.

Course 3 in Business Organisation and Management.

Courses 1 (b) and 3 in Finance.

Course 1 (a) in Transportation.

Course 4 in Modern History.

Course 8 in Law and Political Science.

#### *Journalism.*

Course 4 in Modern History.

Courses 1, 2, and 3 in Business Organisation and Management

Courses 2 and 3 in Finance.

Course 3 (c) in Transportation.

Courses 7 and 8 in Law and Political Science.

Course 1 in Administration.

Courses 1 and 2 in Statistics.

*Training for Civic Affairs.*

Courses 3 and 4 in Modern History.  
Courses 2 and 3 in Business Organisation and Management.  
Course 3 (a) in Transportation.  
Courses 7 and 8 in Law and Political Science.  
Course 1 in Administration.  
Courses 1 and 2 in Statistics.

CONDITIONS OF ADMISSION.

All candidates will be required to present a bachelor's degree, except those who enter under the following conditions :

Students who are able to present courses taken as advanced electives in an undergraduate curriculum, which are substantially the same as those offered in the first year, will be given standing in the second year.

Students of approved ability, of three years' undergraduate standing, may elect the first year courses of the Tuck School for their work of Senior year. At the close of the year they may formally graduate from the College with the bachelor's degree for which they entered. After a year of graduate work in the Tuck School, they become eligible for certification in that school. Students who enter under this provision are expected to have taken the usual College work in mathematics, science, and the ancient or modern languages, and, in addition, such other courses as are equivalent to the following work in Dartmouth College : the prescribed work in History, Economics, and Political Science, and one elective in the departments of History, Economics, and Sociology, together with two years of prescribed and elective work in English Composition and Argumentation, and the elementary courses in two of the three languages, German, French, and Spanish.

Students from other colleges entering the Senior year of Dartmouth College, to avail themselves of this privilege, must present with their certificate of transfer a record of their standing.

SPECIAL STUDENTS.

Applicants who may show fitness to pursue particular courses may be received as special students and will be given certification for work actually accomplished, but will not be given the full certification of the School.

COURSES OF INSTRUCTION.

(Students are required to elect eighteen hours each Semester.)

FIRST YEAR.

*Modern History.*

This work must be preceded by Courses 1 and 2 (Mediæval and Modern History, 378-1763), and one elective course, either Course 3 (English History to the Sixteenth Century) or Course 5 (Colonial History to 1763) in Dartmouth College, or their equivalents.

1. European Political History, 1789-1878. This course will open with a review of the geography of Europe and lectures on the various nationalities, the state of the leading countries on the eve of the French Revolution, and the early stages of that movement. It will continue with text-book work, supplemented with lectures on the part of the instructor, and varied exercises on the part of the students.

2. United States Political History, 1783-1877. This course will be conducted in substantially the same way as the work of the previous course.

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\* Details concerning semesters, hours, and methods for the first year work can be found under the courses of each department in the Dartmouth College Catalogue.

*Economics.*

This work must be preceded by Course 1 (Elementary Economics) and Course 2 (English Economic History) in Dartmouth College, or their equivalents.

3. American Industrial Development. Especial attention will be given to the period since the Civil War, and a careful study will be made of modern industrial organisation, including the development of the great manufacturing industries, the growth of corporations, trusts, and monopolies; the history and problem of transportation; stock and produce exchanges; relations of capital and labour; and the effect of modern methods of business on producer and consumer.

4. History and Theory of Money. Especial attention will be devoted to the financial legislation of the United States. The practical problems before the country will be briefly considered. Modern currency standards in operation in foreign countries.

6. Advanced Theory. A study of the development of economic theory. Assigned readings in the works of the Classical School, especially Smith, Ricardo, and Mill, and in the writings of the representatives of modern development, Marshall, Böhm-Bawerk, Patten, Clark, and others.

*Political Science.*

This work must be preceded by Course 2 (The State, Elements of Politics) in Dartmouth College, or its equivalent.

3. American Constitutional Law. This course is designed to give students a knowledge of the general principles of the constitutional law of the United States, both federal and state. Particular attention is given to the origin and development of American political institutions, to the formation of state governments, and to the immediate causes of the adoption of the Federal Constitution, and to its text.

*Sociology.*

This work must be preceded by Course 2 (Anthropology and Ethnology) in Dartmouth College, or its equivalent.

3. Anthropological Geography. This considers man in relation to his physical environment, as determining his dispersal over the face of the earth, his mode of life, and the density of population. It traces the bearings of the natural surroundings upon man's physical and mental characteristics, and follows this fundamental and necessary adjustment through the history of the family and the state and in the evolution of the forms of economic life.

4. Social Statistics and Applied Sociology. This course has for its foundation an inquiry into the chief results of Vital Statistics, such as birth and death rates, the mortality from different diseases, and under varying social and climatic conditions. These data are then brought into connection with Crime, Pauperism, and Social Reform. It is the biological side of social life.

*Language.*

Students will be expected to pursue throughout the year advanced study in two or three modern languages, German, French, and Spanish, and will enter upon the grade of work which their previous preparation permits. These courses are designed to give training in composition and conversation.

Students whose equipment in one or more of these languages is considered adequate may substitute electives chosen from the Senior courses in Dartmouth College.

*English Composition and Speaking.*

This course will consist in part of training in business forms and commercial correspondence, in part in the discussion of current questions with a view to the acquisition of facility and skill in argument and public speaking.

## SECOND YEAR.

*Modern History and Diplomacy.*

3. Modern History. This course will consist of lectures on the political history of Canada, Mexico, and the South American States, Asia and Africa, with special emphasis on recent developments and particular reference to the phases of their history which might bear on their relations with this country. Under the direction of the instructor the students will do constructive work in the political history of Europe since 1878, each student covering a given period and profiting from the results of the work of other students.

4. Diplomacy. The subject of this course will be the business of international negotiation, and while necessarily parallel to international law, it will deal with that subject only as it must, and in an incidental way. Lectures will be given on the origin and evolution of modern diplomacy; the qualifications and methods of typical modern diplomats; the course of certain specially noteworthy negotiations from the Congress of Vienna to the Venezuela Case, including the evolution and history of the Monroe Doctrine; the organisation of American and foreign diplomatic and consular services; principles of diplomatic procedure; and the duties laid down by the United States Government for its agents in foreign countries. Constructive work in the history of Europe since 1878 will be done by the students.

*Business Organisation and Management.*

1. Corporation Finance. Forms of investment securities, methods of corporation financiering, consolidation, bankruptcy, receivership, reorganisation, general principles of investment. See also Course 1 (c) under Transportation.

2. Money Markets and Speculation. Movements of money and rates of domestic exchange. New York as a financial centre and the influences affecting interest rates. Note and bill brokers. Foreign exchange movements, including a study of the English money market. Panics, signs of their approach and the methods of meeting them. Detailed study of stock and produce exchanges, including a comparison of the exchanges of England and the continental countries.

3. Industrial Resources and Industrial Organisation. Detailed study of the important raw products of the United States from the standpoint of costs, markets, and transportation facilities. Consideration of the more important manufacturing industries of the country, especially iron and steel. A study of the methods of business organisation devised for the conduct of these industries. See also Course 1 (a) under Transportation and Course 1 (b) under Finance for typical instances of the organisation of great undertakings.

4. Accounting and Auditing. General principles of accounting. Nature of the balance sheet and determination of what constitutes a profit. Accounting methods of corporations. General principles of auditing. Theory of depreciation or the writing off of diminishing value. Going concerns *v.* those that have ceased operations. Economic value of location. See also Course 1 under Accounting.

5. Investments. A series of lectures by an experienced financier on the practical handling of investments.

*Finance.*

1. Banking. (a) *Law*. Detailed study of the bank laws of the United States, and of typical states, and of generally accepted banking practice. (b) *Organisation*. The organisation of a bank for business, with the duties and liabilities of its officers and employees. Comparative study of national, state, private, and savings banks, and loan and trust companies. Clearing houses, their functions and administration. (c) *Operation*. Practical methods of operation. Forms of credit transactions, note issues, domestic exchange. Comparative study of English and continental banks.



**2. Public Finance.** Methods of public administration. Public expenditure and revenue. Relation of the Treasury Department to the money market in the insurance of bonds and the placing of deposits. National, state, and municipal debt and taxation. Typical states and municipalities will be carefully studied.

### *Transportation.*

**1. Railroad Service.** (a) *Organisation.* The organisation of a railroad for business, with a discussion of the duties of officers and employees. (b) *Operation.* Practical methods of operation, including a careful study of the regulations governing all forms of railroad service. A study of the traffic department, including systems of car accounting. Theories of rates and methods of forming classifications and rate schedules. Fast freight lines, joint rates, and various forms of railroad associations. (c) *Accounting and Auditing.* See Courses 1 and 2 under Accounting and Course 4 under Business Organisation and Management. (d) *Mechanics.* Study of the elements of railroad construction and maintenance and their costs. Details of locomotives and cars, their use, construction, and repair. Modern mechanical and safety devices, including brakes, couplers, signalling systems, and the like. Purchasing Department, with consideration of properties of materials and railroad supplies. This section of the work will be conducted in part under Course G (2nd part) in the Thayer School of Civil Engineering, under the title "Economics of Location, Construction, and Maintenance of Railways." See also Course 3 under Business Organisation and Management for railroad materials produced by iron and steel industries. (e) *Management.* Competition, discrimination, pooling, combination, consolidation, state ownership or control. See also Course 1 under Business Organisation and Management.

**2. Water Transportation.** (Inland.) (a) *Lakes and Rivers.* The service as a competitor of railroads. The development of lake traffic, with a study of modern facilities. The deep waterways projects. Decline of river commerce. (b) *Canals.* Their economic value and the extent of their use. The Isthmian Canal projects will be considered in Course K in the Thayer School of Civil Engineering.

**3. Foreign Trade.** (a) *Economic Geography.* A survey of the present economic condition of the different parts of the world, their products, resources, and routes of trade, and the influence of physical and social causes in determining that condition. Economic phases of colonial development. (b) *Foreign Exchange.* Theory of foreign exchange and the causes that determine rates. Methods of international payment, movements of capital, monetary standards of foreign countries as they influence international settlements. (c) *Foreign Commerce of the United States.* Development of ocean shipping. Export and import trade of the United States and its competitive relation to other countries. Tariff conditions of the various countries and other forms of commercial interference. Commercial conventions and treaties. See also Course 3 under Business Organisation and Management and Course 2 under Statistics.

**4. Legal Conditions of International Trade.** A series of lectures which aim to present the practical legal aspects of international dealing.

### *Accounting.*

**1. Principles of Accounting.** A series of lectures on the principles of railroad and industrial accounting as applied to financial and operating administration. Methods of corporation book-keeping and forms of financial organisation and management briefly considered.

**2. Theory and Practice of Railroad Statistics.** (a) Revenue and Expenses, why railroads are operated, how organised and administered, and the relation of accounting, auditing, and statistics to operation. General plan and technique of railroad accounting. (b) Revenue accounting, freight and ticket. How the money is collected and covered into the treasury, the safeguards provided. (c) Disbursement accounting, stages and methods of authorisation, checks provided, significance of the different certifications)

possibilities of fraud. (d) Stores and car accounting, various systems, watching balances, use of the car record in car distribution, car mileage, clearing houses, the home record, the foreign record, the interchange record. (e) Statistics of operation, revenue disbursement, motive power, transportation, and maintenance of way. Use of statistics in handling a property. (f) General books, ledger, side ledgers, journal, journal entries, accounts current, general balance sheet, organisation and methods of the accounting office, the division and general office, the shops, the storehouse, the station agency.

#### *Insurance.*

**Insurance.** A series of lectures designed to illustrate the practical workings of insurance as conducted to-day in all its important forms, with special reference to the United States. After a brief discussion of the economic conception of insurance, its history, development, problems, and social service, attention will be given to fire and casualty insurance, to employer's liability and corporate suretyship, but special study will be devoted to its most highly developed form in life insurance. This will involve consideration of fundamental assumptions, rate making, policy construction, varied benefits, field management, advertisements, compensation, solicitation, medical selection, practical accounting, investments, office-work, corporate management, state supervision, insurance law, in insurance by the state. A critical estimate will be presented of the leading theories and different practices related to these questions, the object being to give a just estimate of the business, and a comprehensive knowledge of its present day workings,

#### *Statistics.*

1. **History, Theory and Technique of Statistics.** A course in statistical methods and results, with practical work in investigation and tabulation. An attempt to determine the laws that govern group actions of men. Sources and reliability of statistical data. The methods of distinguishing true and false inferences.

2. **Studies in American Statistics.** Critical study of the contributions of statistics to our knowledge of production, banking, coinage, prices, wages, and particularly domestic and foreign commerce.

#### *Law and Political Science.*

5. **Commercial Law.** An outline of the law of real property, including deeds, mortgages, and wills ; of the law of contracts (Anson on Contracts) ; of negotiable instruments (Bigelow on Bills, Notes, and Cheques) ; of personal property, including sales and bailments ; of agency, carriers, insurance, and trustees.

6. **Industrial and Commercial Corporations.** A course of lectures treating of legal persons, natural and artificial ; causes of the increase of artificial persons (corporations) since 1763, and the consequent development of corporation law ; distinction between partnerships and corporations ; modes of forming corporations ; inviolability of charters ; powers of corporations and their officers and agents ; fiduciary relations of their officers and agents ; rights of stockholders ; relation of stockholders to each other ; issue of stock and rights of creditors ; industrial trusts.

7. **International Law.** This course is historical and explanatory of present international relations. It treats of the origin and development of the rules that generally govern the intercourse of modern civilised states, and specified topics of present interest, such as the effects of annexation upon international obligations, recent cases of intervention, The Hague Conference, contraband of war, and continuous voyages.

8. **Politics and Administration.** A study of American political parties since 1873 ; their organisation and increasingly centralised control ; their policies, and methods chosen for executing them ; existing electoral machinery, its practical working and defects ; some proposed remedies.

*Administration.*

1. Municipal Administration. A series of lectures in which the development of municipal policy will be traced with regard both to the forms and the aims of municipal government. The town meeting, the town council, the city system, and metropolitan administration will be considered in their constitutional bearings and in their practical operation. A comparison of typical city charters, American and foreign, will be made. The proper sphere of the municipality will be considered; first, in its traditional function as protector of person and property; secondly, in the extension of its functions to include the control of public utilities, the education of the electorate, and the care of the dependent classes. The lecturer will discuss the causes of municipal corruption, especially as found in economic conditions, and will trace the relation between municipal reform and social reform in general.

2. Public Administration. See Course 4 under Modern History and Diplomacy, Course 2 under Finance, and Course 8 under Law and Political Science.

*Demography and Social Institutions.*

5. Demography. This is a study of Population or the units of all forms of social life. It involves a consideration of the economic value of various nations and peoples as producers and consumers of commodities. This is followed by an investigation of the social groups or classes into which population tends to fall, both those involved in the social division of labour and those which have a more natural basis.

6. The Psychology of Men in Association. Social phenomena are here viewed from the subjective side and interpreted as modifications of the individual mind due to contact. Human institutions are treated as an expression of the spiritual life of men. Public opinion is analysed and an attempt is made to interpret sympathetically trade unionism, mass and class feeling, and all important group aspirations and rivalries. Social problems raised by racial contact are taken up, and the adaptation of political and social life to the peculiar psychic condition of each people. This is the study of the social environment, as expressing the mind of the individual and in turn modifying it.

*Language.*

The work in Language will be a continuation of that of the first year. Students will be expected to pursue throughout the year the study of one of the three modern languages, German, French, and Spanish.

Language clubs will be formed under the direction of the instructors for practice in conversation. As in the work of the first year, an elective may be substituted when a student's language training is deemed adequate.

*Thesis.*

A thesis may be required embodying original research and representing work in the field of study which the student has been especially pursuing. The thesis is to be prepared during the last Semester, and will be considered equivalent to a course of fifty-four exercises.

*EXPENSES.*

The tuition is the same as in the College, one hundred and ten dollars per year, payable one-half at the beginning of the first Semester, and the other half on March 10 succeeding. The scholarships provided for undergraduates are not available for students of the Tuck School, except in so far as such students may be pursuing the work of the first year of the school as Seniors in Dartmouth College.

The expenses of a student will vary from \$275 to \$550 per year, the most important variable elements being room-rent and board. The College dormitories are open to students of the School.

### FACILITIES.

The headquarters of the School will be the Hubbard House, which will contain reading rooms provided with all periodical literature pertinent to the work, and with seminary rooms containing the necessary books, documents, and reports for the furtherance of investigation. The general library in Wilson Hall will be available, and its equipment along the lines of work in the School will be made more complete and exhaustive as the demand for these facilities increases.

### CERTIFICATION.

Examinations will be held regularly at the close of each Semester, and additional examinations will be given from time to time at the pleasure of the department concerned. The certification of the School will be given only to those students who have satisfied the Faculty as to their fitness, either by a final examination or by the defence of a thesis. For further information address

FRANK H. DIXON, *Secretary,*  
Hanover, N.H.\*

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## APPENDIX Q.

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### UNIVERSITY OF MICHIGAN.

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#### ANNOUNCEMENT OF THE COURSES OF INSTRUCTION IN HISTORY AND POLITICAL SCIENCE, AND OF THE COMBINED COURSE IN COLLEGIATE AND LAW STUDIES, THE COURSE IN HIGHER COMMERCIAL EDUCATION, THE COURSE IN PUBLIC ADMINISTRATION, 1901-1902 (EXTRACT).

#### LIST OF INSTRUCTORS.

#### I.—RESIDENT INSTRUCTORS IN THE DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS.

##### A.—*Instructors whose principal work lies in History and Political Science.*

James B. Angell, LL.D., *President.*†

Henry C. Adams, LL.D., *Professor of Political Economy and Finance.*

Richard Hudson, LL.D., *Professor of History.*

Andrew C. McLaughlin, A.M., LL.B., *Professor of American History.*

Fred M. Taylor, Ph.D., *Junior Professor of Political Economy.*

Earle W. Dowe, A.B., *Assistant Professor of History.*

Charles H. Cooley, Ph.D., *Assistant Professor of Sociology.*

John A. Fairlie, Ph.D., *Assistant Professor of Administrative Law.*

Edward D. Jones, Ph.D., *Assistant Professor of Commerce and Industry.*

Arthur L. Cross, Ph.D., *Instructor in History.*

Duran W. Springer, B.S., *Lecturer on the Science of Accounts.*

Harlow S. Person, A.M., *Instructing Fellow in Economics.*

Andrew H. Wood, *Assistant in History.*

Theo. J. Zimmerman, *Fellow in American History.*

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\* The announcement of the Amos Tuck School for 1902-3, has been received by the Board of Education Library as this goes to press.

† Lecturer on International Law.

**B.—Instructors whose principal work lies outside of History and Political Science.**

Henry S. Carhart, LL.D., *Professor of Physics.*

Robert M. Wenley, Sc.D., D.Phil., LL.D., *Professor of Philosophy.*

Alfred H. Lloyd, Ph.D., *Junior Professor of Philosophy.*

Joseph H. Drake, Ph.D., *Assistant Professor of Latin.*

S. Lawrence Bigelow, Ph.D., *Assistant Professor of General Chemistry.*

**II.—RESIDENT INSTRUCTORS IN OTHER DEPARTMENTS OF THE UNIVERSITY.**

Jerome C. Knowlton, A.B., LL.B., *Marshall Professor of Law.*

Floyd R. Mechem, A.M., *Tappan Professor of Law.*

Otto Kirchner, A.M., *Professor of Law.*

Victor H. Lane, C.E., LL.B., *Fletcher Professor of Law.*

Horace L. Wilgus, M.S., *Professor of Law.*

Victor C. Vaughan, M.D., LL.D., *Professor of Hygiene and Physiological Chemistry.*

**SPECIAL COMMITTEES IN CHARGE OF THE COMBINED COURSE IN COLLEGIATE AND LAW STUDIES.**

Andrew C. McLaughlin.

F. M. Taylor.

Alfred H. Lloyd.

Harry B. Hutchins.

Floyd R. Mechem.

**SPECIAL COMMITTEE IN CHARGE OF THE COURSE IN HIGHER COMMERCIAL EDUCATION, AND IN PUBLIC ADMINISTRATION.**

Henry C. Adams.

Richard Hudson.

Floyd R. Mechem.

Andrew C. McLaughlin.

Fred M. Taylor.

Charles H. Cooley.

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**GENERAL STATEMENT.**

Instruction in History and Political Science in the University of Michigan is organised to meet the many and varied ends for which students may pursue studies along these lines. It includes studies in History and Government, in Political Economy and Finance, in Commerce and Industry, in Sociology, in International Law, in Commercial Law, in the Application of Science to Industry, and in other allied subjects. The purpose of this Announcement is to give a concise statement of the general aims of the instruction in this group of studies, as also of the principles which control their administration.

**HISTORY.**

The purpose of the work in History is to provide for a broad and comprehensive study of history, and for adequate training in the critical and constructive use of the historical method of investigation. The place which history holds in the general scheme of education requires the Departments of History to co-operate with all departments of the University, and to adjust the courses of instruction which they offer to the needs of all students, in whatever line of work they may be interested. The needs of students who find their chief interest in language, literature, philosophy, or science, are held in mind in the adjustment of this work, as well as those who devote themselves primarily to the study of political and social science. The courses offered in history are as comprehensive as the considerations thus suggested. Some of these are designed to give a general survey of the history of Europe, and of America, and of the temporary conditions of Asia and Africa. Others, more special in character, are devoted to the study of comparatively limited fields of investigation, or to



work in which the element of research predominates. These more special courses comprise the higher work in history. They are designed for students who wish to prepare themselves for teaching history and political science, and for candidates for the higher degrees specialising along these lines.

#### POLITICAL SCIENCE.

Under the phrase political science is included a large number of courses upon divers topics which have for their chief purpose to familiarise the student with established political, industrial and social institutions, and to cultivate the power of critical analysis and comparison. All of these courses rest upon history, and the greater number of them conform to the historical method of presentation. Under the system of free elections which obtains in the University of Michigan, these courses may be followed as the major part of a general education, or as the minor part of an education devoted primarily to some other group of studies, and when pursued in this manner their administration conforms to the general rules laid down by the Department of Literature, Science, and the Arts, and by the Graduate School.

Courses in Political Science may also be regarded as technical or semi-professional in character, and may be followed by students as preparatory to some chosen profession or career. When so followed their administration is brought under the direction of special committees, whose chief service it is to arrange a programme of study pertinent to the peculiar purpose held in mind. This phase of organisation is somewhat new in the University of Michigan, and for that reason is made the occasion of special comment.

#### SPECIAL COURSES.

Among the technical or semi-professional aims of instruction in History and Political Science, mention may be made of preparation for the social phase of pastoral work ; for that broad line of duties suggested by the phrase philanthropic service ; for the career of a newspaper writer, so far as that implies insight into social, political, and industrial conditions ; for the various specialised branches of public service ; for the teaching of history and political science ; for the study of the law ; and for the higher grades of a business career.

In the case of students preparing themselves for the study of the law, for commerce, and for public administration, special courses have been organised, known respectively as—

The Combined Course in Collegiate and Law Studies.

The Course in Higher Commercial Education, and

The Course in Public Administration.

For a detailed description of the Course in Higher Commercial Education, see pages 402-405.

#### RELATION TO OTHER DEPARTMENTS OF INSTRUCTION.

Among the peculiar advantages offered students who pursue History and Political Science because of their technical or semi-professional character, is the opportunity of hearing lectures in other Departments of the University and in other branches of study. The Department of Law offers many courses of peculiar interest to students of commerce and of public administration. The Department of Medicine and Surgery provides instruction in hygiene and sanitary science for those who desire to specialise in municipal administration. Special lectures for the commercial and social application of chemistry and physics are given by the members of the scientific department. It is regarded as one of the marked advantages of the University of Michigan that all departments of the University are domiciled upon the same campus, and that under appropriate restrictions all the work of the University is available for all students.

#### THE LIBRARIES.

The General Library of the University contains 114,874 volumes and 1,718 maps. Included in this library is the Parsons Library of Political Economy composed of 4,325 volumes and 5,000 pamphlets. This was



The course in Political Economy is designed to give the student a general knowledge of the principles of the science, and to show the application of these principles to the various branches of human activity. The course is divided into two parts, the first of which deals with the general principles, and the second with the application of these principles to the various branches of human activity.

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#### COURSE IN POLITICAL ECONOMY

1. *Principles of Political Economy*. Four lectures. Lectures, M., W., F., at 11; Th., at 12. The text, *Principles of Political Economy*, by J. B. Clark, is the standard text for this course.

The course is introductory to all other courses in political economy. The principal topics are: the theory of value, the theory of distribution, and the theory of production. The ground covered in the lectures includes the usual topics, Production, Exchange, and Distribution; but Public Finance will be reserved for a special course (4).

2. *History of the Development of Industrial Society*. Lectures and quiz. Three hours. Lectures, Tu., Th., at 11. Quiz, W., Sec. I., at 11; Sec. II., at 1; M., Sec. III., at 1. Other quiz sections will be arranged, if required. Professor Adams.

Course 2 embraces a study of the history of English industrial society from the 15th century to the present time, and is designed to show how modern industrial customs and rights came into existence. It is desirable that it should be preceded by Course 2 in Political Economy, and by a study of English history.

\* Of the 26 courses offered in History only those are quoted, which form part of the Course in Higher Commercial Education, P.T.H.

4. Principles of the Science of Finance. *M., W., F.*, Sec I., at 11; Sec. II., at 3. Professor Taylor.

Finance as here used is not concerned with Money or Banking, but treats of Public Expenditure, Public Revenue, and Public Credit.

4a. Public Finance. Advanced Course. *Tu., Th.*, at 2. Professor Adams.

This course is intended to be supplemental to Course 4, which deals with the principles of finance. Course 4a is devoted rather to the more concrete side. It includes chiefly a comparative study of financial legislation and administration among the leading nations. For the current year the course will be combined with Course 17. The instructor reserves the right to restrict the number.

5. Problems in Political Economy. Lectures and quiz. *Four hours.* Lectures, *M., W., F.*, at 2. Quiz, *Tu.*, Sec. I., at 1; Sec. II., at 2; Sec. III., at 3. Professor Adams.

[Course 5 (which alternates with Course 5a, and is not given in 1901-2), treats in a cursory manner current problems in political economy. The problems studied are as follows: The Immigration Problem, Industrial Crises, Free Trade and Protection, The Railway Problem, The Municipal or Trust Problem, and Taxation. It is designed as a supplement to Course 2, by which it must be preceded.]

5a. Social and Industrial Reforms. Lectures and quiz. *Four hours.*

Course 5a (which alternates with Course 5) treats in a cursory manner of those social reforms forced upon society by the industrial development of the past century. The special problems studied are the following: Co-operation, Profit-sharing, Communism, Socialism, Factory Legislation, Working Men's Insurance, Trades Unions, and Industrial Federation. It is designed as a supplement to Course 2, by which it must be preceded.

[6. Transportation Problems. Lectures and quiz. Lectures, *M., W.*, at 2. Quiz on assigned reading and lectures, *F.*, at 2. Professor Adams.

Course 6 (which alternates with Course 6a, and is not given in 1901-2) considers the social and industrial significance of modern transportation, traces the development of railway transportation in this country, and in the more important European countries, discusses the administrative and legislative organisation of railway systems, studies the history of the railway problems of the United States, and pays especial attention to the experiment of control of railways through commissions. This is regarded as one of the advanced, semi-professional courses.]

6a. Administration of Corporate and Public Industries. Lectures and quiz. Lectures, *M., W.*, at 2. Quiz upon assigned reading and lectures, *F.*, at 2. Professor Adams.

Course 6a (which alternates with Course 6) undertakes an analysis of industrial organisation primarily from the administrative point of view. It considers the history and social significance of rapid transit in cities and other quasi-public industries, both public and private. It studies railway administration under public as well as private ownership, and makes a special investigation into the history, organisation, and administration of the post office department of this and other countries. This is regarded as one of the advanced, semi-professional courses.

8. Theory and History of Money. *Tu., Th.*, at 11. Professor Taylor.

The first half of the semester will be occupied with a fuller study of special topics than is possible in Course 2. Among these will be the Value of Money, the Theory of the Standard and the Regulation of Paper Money. The second half of the semester will be given to the history of money, particularly in the United States.

9a. Theory and History of Banking. *Tu., Th.*, at 11. Professor Taylor.

Like Course 9, this course will break into two parts devoted respectively to theory and history. Among the topics considered will be the Nature

and Social Functions of Banking, the Natural Laws of Banking Phenomena, Systems of Regulation, &c.

12. Economic Theory. Advanced Course. *Tu., Th., at 2.* Professor Taylor.

Ingram's History of Political Economy will serve as a basis for this course, but much of the time will be given to the study of masterpieces.

12a. Economic Theory. Advanced Course. *Tu., Th., at 2.* History of opinion on leading problems. The work will be conducted somewhat after the fashion of a seminary. Open only to advanced students.

13. The Theory and Practice of Statistics. *Th., at 10.* Assistant Professor Cooley.

This course treats statistics as a method of social research, an instrument important not only to economists and statisticians, but also to all who wish to qualify themselves to understand or criticise current social and political discussion. The class read Mayo-Smith's Statistics and Sociology, and, in addition, each member is assigned an exercise intended to afford some practice in collating statistical material and presenting it in tabular and graphical form. Advanced students only are allowed to elect the course.

14. Seminary in Economics. *Two hours, arranged with instructor.* Professor Adams.

The subject to be investigated is Labour Organisations. Webb's "History of Trade Unionism" will be taken as the starting point of this investigation.

17. Seminary in Finance. *Two hours. Hours arranged with instructor.* Professor Adams.

The subject to be investigated is Local and State Taxation. A few lectures will be given by the instructor on the Classification of Financial Systems. This course will be combined for the current year with 4a.

#### INDUSTRY AND COMMERCE.

29. Commercial Geography of the Extractive Industries. Lectures and topical reports. *M., W., F., at 3.* First semester. Assistant Professor Jones.

The design of this course is to present the technical and trade conditions which determine the success or failure of the chief extractive industries, such as agriculture, horticulture, forestry, fisheries, and mining.

30. Commercial Geography of the Manufacturing Industries. Lectures and topical reports *M., W., F., at 3.* Second semester. Assistant Professor Jones.

This is a continuation of the above course, and presents the chief technical processes and trade relations of the manufacturing industries.

31. The Resources and Extractive Industries of the United States. Lectures and assigned readings. *M., W., F., at 11.* First semester. Assistant Professor Jones.

A study of the natural and social resources of the United States and of the chief extractive industries to determine their location, present condition, and relations to each other.

32. The Manufactures of the United States. Lectures and assigned readings. *M., W., F., at 11.* Second semester. Assistant Professor Jones.

The evolution, present location, and condition of our chief manufacturing industries will be presented, and the relations of these industries to one another, to sources of raw materials, transportation, and market facilities, and foreign trade.

33. The Distributive and Regulative Industries of the United States. Lectures and assigned readings. *M., W., F., at 11.* Assistant Professor Jones.

[This course, which alternates with Course 34 (not given in 1901-2) will include a description of the various methods of marking goods, of the

classifications, grades, brands, and trade marks employed, and of wholesale and retail trade, jobbing, &c. Attention will also be given to those private organisations, not connected with money and banking, which guide and control the industrial process, such as trade associations and trade papers, boards of trade and chambers of commerce, stock and produce exchanges, national and export associations, museums and expositions.]

34. Technique of Foreign Trade. *M., W., F.*, at 11. Assistant Professor Jones.

[This course alternates with Course 33 (not given in 1901-2). It treats of the supply and demand areas of the world, with special reference to the chief articles of international trade. It comprises a study of the documents, regulations, and customary procedure of foreign trade, including methods of selling goods in foreign countries, shipping routes, customary packages, weights and measures, tariffs, export bounties, commercial treaties, and foreign industrial legislation.]

35. European Commercial Geography. Lectures and assigned readings. *Tu., Th.*, at 11. Assistant Professor Jones.

A presentation of the resources and industries of the chief European states, particular emphasis being laid upon openings for American trade.

36. American Trade with China, Japan, and the Philippines. *M., W.*, at 10. Assistant Professor Jones.

This course (not given in 1901-2) will include a statement of the resources and industries of the countries mentioned, and a consideration of the present and probable future trade of the United States with them.

37. Science of Accounts. *Tu., Th.*, at 11. Mr. Springer.

This course is designed to give the student an insight into that phase of administrative management which has been styled "the vital element of business." It assumes that the student is familiar with the simpler forms of bookkeeping. A study will be made of the methods used by auditors in conducting investigations, illustrations from the business world forming the basis of this part of the work. Considerable time will be devoted to a consideration of the essential data concerning the various lines of commercial enterprises which must be furnished to the financier by the accountant in order that correct deductions may be made with regard to the needs of the business under discussion, and the means which must be taken to increase its efficiency.

38. History of Industrial Chemistry. *Tu., Th.*, at 11. Assistant Professor Bigelow.

The purpose of this course and of the course in General Chemistry which is required for its election, is to familiarise students with the significance of chemistry in the process of manufacture, and to enable the factory manager to understand the reports of laboratory experts. He learns chemical nomenclature, chemical laws and principles, and something of the purpose of chemical tests and investigations, in the general course given by the Chemical Department as introductory to further study. In the present course he learns of the manner in which chemical principles have been applied in the development of chemical technique, and prepares himself to judge intelligently proposals for the further application of such principles. This course will not be given in 1901-2, because no class is yet prepared to profit by it. Course 35, European Commercial Geography, will be substituted for it.

39. History of Industrial Physics. *Tu., Th.*, at 11. Professor Carhart.

The purpose of this course is, in general, the same as that of Course 38, History of Industrial Chemistry. The course in Physics preparatory to this course is 1M, Mechanics, Sound, and Light, and 2M, Heat and Electricity. This course is not given in 1901-2.

40. Thesis Seminary. *Tu.*, 7-9. Professors Adams and Taylor and Assistant Professor Jones.

This seminary is confined to students in the course in Higher Commercial Education. Its chief purpose is to hear reports from such students as are required to present a thesis for graduation. It will also be made the occasion of lectures from men not regularly connected with the academic staff of the University, in which case all students enrolled in the course in Higher Commercial Education will be expected to attend.

#### GENERAL AND COMMERCIAL LAW.

##### 41. Commercial Law.

It is the design of this course to instruct students in the fundamental principles of law, so far as these principles pertain to the ordinary activities of business life. It is a three-hour course throughout the year, comprising two lectures and one quiz upon lectures and assigned readings, each week. The topics covered by this course are as follows :

##### *a. First Semester.*

Elementary Law (six lectures). Professor Mechem.  
Contracts (twelve lectures). Professor Knowlton.  
Agency (eight lectures). Professor Mechem.  
Sales (ten lectures). Professor Lane.

##### *b. Second Semester.*

Bailments and Carriers (eight lectures). Professor Lane.  
Bills of Exchange and Promissory Notes (eight lectures). Professor  
Partnership (eight lectures). Professor Mechem.  
Corporations (twelve lectures). Professor Wilgus.

Public Corporations. *Two hours a week*, second semester. Lectures. Professor Knowlton.

The Science of Jurisprudence. *One hour a week*. Second semester. Text-book, accompanied by oral expositions. Professor Mechem.

Taxation. *One hour a week*. Second semester. Professor Mechem.

Public Officers. *One hour a week*. First semester. Professor Mechem.

Private International Law. *Two hours a week*. First semester. Professor Kirchner.

In addition to the regular course noted above, the lectures on the following topics are open to students in the course in Higher Commercial Education :—

Insurance, Dr. M. M. Bigelow.  
Mining Law, Mr. Clayberg.  
Patent Law, Mr. Walker.  
Copyright Law and Trademarks, Mr. Reed.  
Railway Law, Professor Knowlton.

#### THE COURSE IN HIGHER COMMERCIAL EDUCATION.

It is the aim of this course to give special training in the construction and organisation of modern industry and commerce. While placing special stress upon what is technical or professional in a course preparatory to a business career, ample provision is made for instruction in history, language, science, and other lines of study which contribute to a general education. This course is designed to provide an education equal in scope and mental discipline to any which the University offers.

The course in Higher Commercial Education covers three years of systematic instruction. The time for enrolment, in the case of candidates for a degree, is at the beginning of the third year of University residence

The degree of Bachelor of Arts will be conferred upon students who conform to the general requirements of graduation, at the close of two years' enrolment in this Special Course (that is, after the fourth year of residence in the University); and the degree of Master of Arts at the close of the third year's enrolment.

Students who propose entering upon the course in Higher Commercial Education should devote the first and second years of residence in the University to collegiate studies and to studies preparatory to this Special course. It is desirable that such students should complete before the close of their second year of residence the courses offered in Mediæval and Modern History, and in English History (Courses 1, 2, 3, and 4). The course in the History of the Development of Industrial Society, and the course in the Elements of Political Economy (Political Economy, Courses 2 and 3), should also be completed. Other preparatory courses are required for the election of certain of the advanced technical courses. Students are urged to consult with the committee in charge of the course in Higher Commercial Education at the time they enter the University, in order that the work of the first and the second year may be adjusted properly.

Students regularly enrolled in the course in Higher Commercial Education will be expected to elect *ten hours* a week under the direction of the committee in charge, during the third and fourth years of their residence in the University, six hours a week being left for general elections. In the fifth, or Graduate year, the committee will claim the entire time of the student.

The following programme is presented as suggesting the most appropriate order of elections :

THIRD YEAR IN THE UNIVERSITY.

FIRST SEMESTER.		
COURSE.	INSTRUCTOR.	HOURS.
Social and Industrial Reforms . . . . .	Professor Adams . . . . .	4
Commercial Geography of the Extractive Industries	Assistant Professor Jones . . . . .	3
Theory and History of Money . . . . .	Professor Taylor . . . . .	2
General Elections . . . . .	. . . . .	7
		16
SECOND SEMESTER.		
COURSE.	INSTRUCTOR.	HOURS.
Science of Finance . . . . .	Professor Taylor . . . . .	3
Commercial Geography of the Manufacturing Industries.	Assistant Professor Jones . . . . .	3
Theory and History of Banking . . . . .	Professor Taylor . . . . .	2
Statistics . . . . .	Assistant Professor Cooley . . . . .	1
General Elections . . . . .	. . . . .	7
		16



**FOURTH YEAR IN THE UNIVERSITY.****FIRST SEMESTER.**

COURSE.	INSTRUCTOR.	HOURS
Problems in Political Economy* . . . . .	Professor Adams . . . . .	4
Resources and Extractive Industries of the United States.	Assistant Professor Jones . . . . .	3
Commercial Law . . . . .	Professors of the Law Faculty . . . . .	3
Science of Accounts . . . . .	Mr. Springer . . . . .	2
General Elections . . . . .	. . . . .	4
		16

\* Not given in 1901-2; alternate with Social and Industrial Reforms.

**SECOND SEMESTER.**

COURSE.	INSTRUCTOR.	HOURS.
Administration of Corporate and Public Industries	Professor Adams . . . . .	2
The Manufactures of the United States . . . . .	Assistant Professor Jones . . . . .	3
Commercial Law . . . . .	Professors of Law Faculty . . . . .	3
History of Industrial Chemistry† . . . . .	Assistant Professor Bigelow . . . . .	2
General Elections . . . . .	. . . . .	6
		16

† European Commercial Geography will be substituted for this course in 1901-2.

**FIFTH YEAR IN THE UNIVERSITY.****FIRST SEMESTER.**

COURSE.	INSTRUCTOR.	HOURS.
The Distributive and Regulative Industries of the United States.	Assistant Professor Jones . . . . .	3
Technique of Foreign Trade . . . . .	_____ . . . . .	3
The Money Market † . . . . .	Professor Taylor . . . . .	2
Labour Laws of the United States and Europe § . . . . .	_____ . . . . .	2
Thesis Seminary . . . . .	Professors Adams, Taylor, and Assistant Professor Jones.	2

† Including the study of foreign exchanges and the speculative market.

§ For the current year the lectures of this course will be included in "Social and Industrial Reforms."

SECOND SEMESTER.

COURSE.	INSTRUCTOR.	HOURS.
Transportation Problems* . . . . .	Professor Adams . . . . .	3
European Commercial Geography . . . . .	Assistant Professor Jones . . . . .	2
American Trade with China, Japan, and the Philippines.	Assistant Professor Jones . . . . .	2
History of Industrial Physics . . . . .	Professor Carhart . . . . .	2
Business Organisation . . . . .	. . . . .	2
Thesis Seminary . . . . .	Professors Adams, Taylor, and Assistant Professor Jones.	2

\* Not given in 1901-2 ; alternate with Administration of Corporate and Public Industries.

APPENDIX R.

REPORT OF THE SPECIAL COMMITTEE OF THE CHAMBER OF COMMERCE OF THE STATE OF NEW YORK ON COMMERCIAL EDUCATION (Including Schemes for Courses in Commercial Education in Columbia University.)

[Submitted to the Chamber, April 6, 1899, and unanimously adopted.]

TO THE CHAMBER OF COMMERCE :

Your Special Committee on Commercial Education beg leave to submit a partial report. The Chairman of your Committee, being also the President of Columbia University, submitted to the Committee of the Chamber, at its first meeting, a tentative programme for a course in Commerce at the University, which had been placed in his hands by Mr. Edmond Kelly, of the Faculty of Political Science, about a year before. The Chairman stated that such a course, if it were approved by the Committee, could probably be offered by the University if the Chamber were prepared to make a subvention to the University of the sum of \$10,000 a year for a period of five years. The Committee were of the opinion that while such a course would not cover the entire field of commercial education, in which the Chamber would reasonably be expected to take an interest, it would, nevertheless, afford, if found to be practicable, a satisfactory course of instruction for those desiring to equip themselves in the most complete manner for a commercial career. The Committee also were glad to learn that this important side of the subject committed to them could be dealt with on so high a plane at comparatively so small a cost. The Committee, therefore, requested the Chairman, in his capacity as President of the University, to look into the question in all its details, and to submit to the Committee, if possible, a definite proposition. This proposition is attached to this report. Your Committee also are glad to call the attention of the Chamber to the good progress that is making in relation to the establishment of a Commercial High School by the Board of Education of the City of New York. Such a school has already been determined upon, whenever funds are available for the purpose, and only the details remain to be developed. With a Commercial High School, maintained by the City, and with a Collegiate and University Course in Commerce maintained by Columbia University, the City of New York would command facilities for commercial education of a very high order. The opportunity thus afforded would cover the entire period of study, from the end of the grammar school to the most advanced investigation of commercial problems.

The course in Commerce originally proposed to your Committee began at a point equivalent to the Third or Fourth year in Columbia College and extended over a period of four or five years. The Collegiate Course in Commerce now proposed by the University is a term in a point equivalent to the beginning of the term course in Columbia College and is to be open to students of the grade of graduates from the High School. Students graduating from the proposed Commercial High School might very probably obtain advanced standing in the Collegiate Course in Commerce, and, presumably, students graduating from any course in any High School could enter upon the course in Commerce by advantage, and without a break in their work. The Collegiate Course in Commerce covers four years, and it can be supplemented by University courses upon commercial subjects, covering one, two or three years, or even longer, at the pleasure of the student.

The University already offers many courses which are a part of the necessary education of any man who wants the most thorough training for a commercial career. Broadly speaking, it is necessary to supplement the courses already offered in the University only by courses in commercial geography, commercial history, and the like, by courses in domestic and foreign commercial law, and by courses, more or less detailed in accounting. It is evident, therefore, that the plan proposed by your Committee offers the promise of a very complete result at a comparatively small outlay.

Asking reference to the proposal submitted by the President of the University, your Committee recommend the adoption of the following resolutions:—

*Resolved*—That the Chamber of Commerce endorse the plan proposed by its Special Committee on Commercial Education, for the establishment through the co-operation of the Chamber, of a Collegiate Course in Commerce at Columbia University.

*Resolved*—That the President and Secretary of the Chamber be authorised to enter into an agreement with the Trustees of Columbia College for the establishment of such a course, upon the conditions indicated in the proposal of the President of the University, whenever the Chamber shall have received guarantees, satisfactory to the President of the Chamber, that the money called for by the proposed subvention will be forthcoming.

*Resolved*—That the officers of the Chamber may take such action as may be necessary to secure the required guarantees.

Respectfully submitted.

(Signed)	SETH LOW, GUSTAV H. SCHWAB, JAMES G. CANNON, WM. BAYARD CUTTING, FRANCIS B. THURBER,	}	<i>Special Committee on          Commercial Education</i>
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NEW YORK, March 30th, 1899.

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COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK.

PRESIDENT'S ROOM, March 30th, 1899.

*To the Special Committee of the Chamber of Commerce on Commercial Education.*

GENTLEMEN,—By the authority of the Trustees of Columbia College, I have the honour to submit the following tentative proposition, subject to approval both by the Chamber and by the Trustees of the University.

I propose that there be established at Columbia University, under the charge of the College Faculty, a Collegiate Course in Commerce of four years' duration, open to students of the grade of High School graduates; that this course, for the time being, shall lead to a certificate but not to a degree; that it shall be supplemented by graduate courses which shall carry the instruction in commerce to any point that may be desired.

Two alternative outlines are submitted, as indicating, from the point of view of the University, what such a course should be ; but the University reserves the right at all times to modify the details of the course at its discretion. The alternative plans proposed differ from each other principally in the amount of time allotted to the subjects specifically related to commerce. In a four years' course of 15 hours per week a year, covering in all 60 hours of instruction, the first plan proposes that 34 hours, or 56½ per cent. of the course, shall be given to distinctively commercial subjects. The second plan proposes that 21 hours, or, approximately, 34 per cent. of the total time, shall be given to commercial subjects. In regard to the two plans, it is to be said that the first plan looks at the matter mainly from the point of view of the political economist, and that it would turn out men more highly specialised and better equipped to understand the problems of commerce, so far as they involve questions of distribution. The second plan pays more regard to the equipment of the student for understanding the processes of production, especially in the direction of chemistry, and aims to give to him a broader general training. It is said that the European Schools of Commerce, generally, are feeling that it is a mistake to attempt over-specialisation until the student is well advanced in his course. It is probable that by a system of elective studies a plan may be developed which will permit the students to pursue their studies at their own option nearly along either the line of the first plan or of the second, as they may prefer.

It is believed that the first plan, so far as it relates to the four years course, can be carried into effect by a grant of from \$10,000 to \$12,500 a year. With a grant of \$16,000, other courses, as outlined, could be added. With a grant of \$20,000, the full proposal, covering both the collegiate and the graduate courses outlined, could be carried into effect.

It is believed that the second plan could be carried into effect upon a grant of from \$10,000 to \$12,500 a year.

In connection with either plan the sum of one thousand dollars a year could be advantageously used for the purchase of charts, diagrams, illustrative material, and the like.

So long as the course in Commerce rests upon a temporary basis, it is thought to be wise to administer it under the College Faculty, and to reward the completion of it by a certificate rather than by a degree. It may safely be left to time to determine whether the course ought to lead to a degree, and whether it can be better administered in a school by itself. Any permanent endowment might properly contemplate that a certain number of scholarships should be at the disposal of the Chamber. While the course is upon an experimental basis, on the other hand, this aspect of the question should be left to be dealt with upon its merits, from time to time, without becoming in detail a specific part of the agreement. It may be necessary to ask for a continuance of the grant beyond the period of five years ; but, if the course is successful, it is presumed that this can be arranged in case of need.

The details of the plans alluded to are attached to this letter.

Respectfully,

(Signed)

SETH LOW,

*President of Columbia University.*

#### PLAN I.

This is intended to be a Collegiate Course in Commerce. It presupposes graduation from a secondary school, public or private, in which English mathematics, history, a natural science, and one modern language will have been systematically studied to the extent now required for admission to Columbia College. In form and in content it is adapted to students of college age, namely, from 16 to 20 years.

In addition to the training provided in commercial subjects, the Course includes training for two years in writing English, for two years in a modern European language, for two years in European and American history, and for three years in political economy and social science. It

offers opportunities for the study of industrial chemistry, of a second and a third modern language, and of literature, if any of these be desired.

Of the 60 hours required (4 years of 15 hours each) 4, or 6½ per cent., are devoted to instruction in writing English ; 6, or 10 per cent., to European and American history ; 6, or 10 per cent., to a modern European language ; 10, or 16½ per cent., to political economy and social science ; and 34, or 56½ per cent., to the study of commerce itself in its various phases.

It will be observed that this curriculum comprises fundamental courses in the principles governing business, combined with detailed courses in practice. It is intended that many of these latter courses, as well as some of the former, should be given by men having an intimate personal acquaintance with actual business life. Among such courses would be those in Accounting, Transportation, Technique of Trade and Commerce, Commercial Ethics, Commercial Credits, Insurance, and Commercial Opportunities.

### COURSE IN COMMERCE AND FINANCE CURRICULUM.

<i>Required :</i>	FIRST YEAR.	<i>Hours.</i>
RHETORIC A.—Rhetoric and English Composition - - - - - Purely an introductory course, intended to teach correctness and clearness of expression, and to give the student practice in the more elementary kinds of composition.		3
HISTORY A.—Epochs of Ancient, Mediæval, and Modern History, with special reference to forms of government, and changes in social conditions - - - - -		3
COMMERCE 1.*—Accounting - - - - - Principles and practice of financial and commercial book-keeping, accounting, and arithmetic.		3
COMMERCE 4.*—Economic Geography - - - - - Topography, Orography, Hydrography, Meteorology, Geognosy, Geography (economic effects of shapes of continents, of contour of land, of water masses, of temperature and moisture, of zones of agricultural production, forest areas and mineral belts).		3
One of the following :—		
GERMAN A.—Elementary Course - - - - - Intended to familiarise the student with the syntax and the common vocabulary of the language so as to enable him to read ordinary German at sight.		3
FRENCH A.—Elementary Course - - - - - The work will consist of a careful study of French grammar, both elementary and advanced, and of French syntax. In connection with the grammar, translation will be taken up, beginning with simple French texts.		
SPANISH I.—Elementary Course - - - - - In this course the study of Spanish is taken up from the beginning, stress being laid on the acquisition of a correct pronunciation, and of a careful knowledge of the facts of the language. The student's energy is concentrated chiefly upon the attainment of a full and accurate reading knowledge, to which end the study of grammar is subordinated, though made systematically to contribute.		
ITALIAN I.—Elementary Course - - - - - Primarily designed to prepare beginners for the study of Italian literature. In a secondary and subsidiary way it is also designed to drill them in the practical use of the language.		
Total - - - - -		15

\* New courses to be established.

Optional :

Any other modern language.  
Any natural science including Chemistry 24 (Industrial Chemistry). The subjects discussed in Chemistry 24 are :—  
(1.) Air: nature, sources of contamination, sewer-gas, plumbing, draining, disinfection, ventilation. (2.) Water: composition of natural waters, pollution, disposal of sewage and house refuse. (3.) Artificial Illumination: candles, oils, and lamps, petroleum, gas and its products, electric light. (4.) Limes, mortars, and cements. (5.) Building stones: decay and preservation. (6.) Timber and its Preservation: pigments, paints, essential oils, varnishes preserving processes. (7.) Explosives: gunpowder, gun-cotton, nitro-glycerine. (8.) Glass and ceramics. (9.) Electro-metallurgy. (10.) Photography.

SECOND YEAR.

Required :	Hours.
RHETORIC B.—Practice in writing English - - -	1
This course consists of a series of graded themes, so arranged as to give the student practice in all the principal kinds of prose composition.	
HISTORY 4.—History of the United States to the Close of Reconstruction, 1877 - - - - -	3
ECONOMICS I.—Economic History of England and America (half year). This course studies primarily the economic history of England, as affording the clearest picture of the evolution of economic life from primitive society to the complicated mechanism of modern industrial life. Incidentally a comparison is made with the contemporary movements in other European countries. Beginning with the seventeenth century, attention is directed to facts of American economic development, and the last part of the course is devoted exclusively to the study of the economic and social conditions underlying the history of the United States.	3
ECONOMICS A.—Outlines of Economics (half year). Text-book, and lectures on the evolution of the modern economic organisation, the principle of economic freedom and the institution of private property.	
COMMERCE 5.*—History of Commerce A. - - - -	3
Commercial Development of the Eastern Hemisphere, or Old World; the Southern Movement (Africa), the Eastern Movement (Oceania, Asia), the Western Movement (Persian Gulf, Mediterranean, Atlantic in Middle Ages, Modern Europe).	
COMMERCE 13.*—Study of Commercial Products - - -	2
Economic Botany, Economic Zoology, Economic Mineralogy.	
FRENCH, GERMAN, SPANISH, or ITALIAN - - - -	3
Total - - - - -	15

Optional :

Any other modern language.  
Any natural science.  
Any course in history open to Sophomores.  
Any course in English open to Sophomores.

\* New courses to be established.



THIRD YEAR.

<i>Required :</i>	<i>Hours</i>
ECONOMICS 3.—Practical Political Economy - - - -	3
A more detailed study of markets, money, banking, international trade, capital and labour, etc.	
COMMERCE 6.*—History of Commerce B - - - -	3
Commercial Development of the Western Hemisphere or New World. Aboriginal America (native exploitation) ; Colonial America (source of raw material) ; Independent America (point of departure for further extension of economic civilisation across the Pacific) ; the meeting of the East and West. America's Place in the Com- merce of the World.	
COMMERCE 12.*—Technique of Trade and Commerce - -	3
System of weights and measures ; currency and banking systems ; customs regulations ; storage, bonding, and harbour regulations ; rules of navigation ; markets and fairs ; exchange and price quotations ; study of com- mercial documents ; operations in produce exchanges ; nomenclature and vocabulary.	
COMMERCE 14.*—Commercial Law - - - -	3
COMMERCE 10.*—Inland Trade and Transportation -	3
Historical and Comparative. Roads, canals, railways. Principles, practice, and legislation.	
Total - - - -	15

*Optional :*

COMMERCE 2.*—Banking Accounting - - - -	2
Bank operations, exchange, arbitrage, transactions on stock exchange, etc.	
COMMERCE 19.*—Commercial Credits - - - -	2
COMMERCE 17.*—Commercial Opportunities - -	
Any modern language.	
Any natural science.	
Any course in history open to Juniors.	
Any course in English or Literature open to Juniors.	

FOURTH YEAR.

<i>Required :</i>	<i>Hours.</i>
COMMERCE 7.*—Commercial Geography (half year) - -	3
Commercial relations of the continents ; of the various zones of production.	
COMMERCE 8.*—Commercial Theory (half year) - - -	
COMMERCE 11.*—Merchant Shipping and Trade Routes -	3
Historical and Comparative Interoceanic Communications.	
COMMERCE 15.*—Foreign Commercial Law - - - -	3
ECONOMICS 4.—Taxation and Finance - - - -	2
This course is historical, as well as comparative and critical. After giving a general introduction, and tracing the history of the science of finance, it treats of the various rules of public expenditures and the methods of meeting the same among different civilised nations. It describes the different kinds of public revenue, in- cluding the public domain and public property, public	

\* New courses to be established.

*Hours.*

works and industrial undertakings, special assessments, fees, and taxes. It is in great part a course on the history, theories, and methods of taxation in all civilised countries. It considers also public debt, methods of borrowing, redemption, refunding, repudiation, etc. Finally, it describes the fiscal organisation of the state by which the revenue is collected and expended, and discusses the budget, national, state, and local. Although the course is comparative, the point of view is American. Students are furnished with the current public documents of the United States Treasury, and the chief financial reports of the leading commonwealths, and are expected to understand all the facts in regard to public debt, revenue, and expenditure therein contained.

**SOCIOLOGY 17.—Statistics and Sociology**

**This course is intended to train students in the use of statistics as an instrument of investigation in social science. The topics covered are : Relation of statistics to sociology, criteria of statistics, population, population and land, sex, age, and conjugal condition, births, marriages, deaths, sickness and mortality, race and nationality, migration, social position, infirmities, suicide, vice, crime, nature of statistical regularities -**

2

## SOCIOLOGY 18.—Statistics and Economics

**This course covers those statistics of most use in political economy, but which have also a direct bearing on the problems of sociology. These include the statistics of land, production of food, condition of labour, wages, money, credit, prices, commerce, manufactures, trade, imports and exports, national wealth, public debt, and relative incomes.**

## COMMERCE 16.—Commercial Treaties

2

[illegible]

**Optional :**

**COMMERCE 3.\*—Railroad, Corporate and Public Accounting - 2**

**COMMERCE 18.\*—Commercial Ethics** . . . . . 2

**COMMERCE 20.\*—Insurance** - - - - - **2**

**SOCIOLOGY 15.—Principles of Sociology (this is a text-book course) - - - - - 2**

**ECONOMICS 6.—Corporations and Trusts ; Effect on Production  
and Distribution - - - - - 2**

**Economics 11 and 12.** - - - - - **2**

**ECONOMICS 11.—Communitistic and Socialistic Theories (half year).**

This course studies the theories of St. Simon, Fourier, Proudhon, Rodbertus, Marx, Lassalle, and others. It aims to utilise recent discoveries in economic science in making a critical test of these theories themselves and of certain counter-arguments. It examines the socialistic ideals of distribution, and the effects that, by reason of natural laws, would follow an attempt to realise them through the action of the State.

**ECONOMICS 12.—Theories of Social Reform (half year).**

This course treats of certain plans for the partial reconstruction of industrial society that have been advocated in the United States, and endeavours to

Hours

determine what reforms are in harmony with economic principles. It treats of the proposed single tax, of the measures advocated by the Farmers' Alliance, and of those proposed by labour organisations. It studies the general relation of the State to industry.

PUBLIC LAW 17.—Municipal Government - - - - 1

This course will include a brief survey of municipal development, with a view to determining the conditions that make municipal prosperity, and those that contribute to its decay. It will include a brief study of municipal organisation in Europe and in the United States ; the respective merits of government by Mayor and government by Council ; the relation of the city to the State, or Home Rule ; unsolved municipal problems, such as the treatment of sewage and garbage ; the distinction between dispensable and indispensable municipal functions ; whether the indispensable functions of municipal government, such as charity and correction, can be usefully usurped by private associations, however well intended ; how far municipal government is business, how far it is humanitarian ; the result of efforts to extend dispensable municipal functions in Europe, as, for example, the ownership and exploitation of its own franchises, municipal lodging-houses, municipal tenements, etc. ; the actual organisation of municipal government in New York City ; the history of New York City, particular attention being given to its history since the TWEED Ring ; the actual condition of political forces in New York City to-day, and a study of the questions that are included in the term " practical politics."

- Any course in history open to Seniors.
- Any course in English or Literature open to Seniors.
- Any course in Philosophy or Psychology open to Seniors.
- Any modern language.

Graduate Courses are offered in the School of Political Science. Students are recommended to take them in the following order :—

Hours.

1st Year.	Railroad Problems	-	-	-	-	-	-	2
	Industrial and Fiscal History of the United States	-	-	-	-	-	-	2
	Economic Theory	-	-	-	-	-	-	2
	Anthropology	-	-	-	-	-	-	2
	General Sociology	-	-	-	-	-	-	2
	Progress and Democracy	-	-	-	-	-	-	2
	Constitutional Law	-	-	-	-	-	-	3
	History of Diplomacy	-	-	-	-	-	-	2
	Administrative Law	-	-	-	-	-	-	2
	History of European Law	-	-	-	-	-	-	2
	History : Any of the University courses.							
2nd Year.	Comparative Colonial Administration	-	-	-	-	-	-	2
	History of Commercial Theory	-	-	-	-	-	-	2
	History of Economics	-	-	-	-	-	-	2
	International Law	-	-	-	-	-	-	2
	The Law of Taxation	-	-	-	-	-	-	1
	Comparative Jurisprudence	-	-	-	-	-	-	2
	International Private Law	-	-	-	-	-	-	1
	Pauperism	-	-	-	-	-	(half year)	2
	Criminology	-	-	-	-	-	(half year)	
	Tariff Administration	-	-	-	-	-	-	
	History : Any of the University courses.							

NEW COURSES TO BE GIVEN UNDER THE TITLE OF  
COMMERCE.

										Hours.
COMMERCE.	1. Accounting A	-	-	-	-	-	-	-	-	3
	2. Accounting B (optional)	-	-	-	-	-	-	-	-	2
	3. Accounting C (optional)	-	-	-	-	-	-	-	-	2
	4. Economic Geography	-	-	-	-	-	-	-	-	3
	5. History of Commerce A	-	-	-	-	-	-	-	-	3
	6. History of Commerce B	-	-	-	-	-	-	-	-	3
	7. Commercial Geography	-	-	-	-	-	-	-	}	3
	8. Commercial Theory	-	-	-	-	-	-	-		
	9. History of Commercial Theory (graduate)	-	-	-	-	-	-	-	-	2
	10. History of Inland Transportation	-	-	-	-	-	-	-	-	3
	11. Merchant Shipping and Trade Routes	-	-	-	-	-	-	-	-	3
	12. Technique of Trade and Commerce	-	-	-	-	-	-	-	-	3
	13. Study of Commercial Products	-	-	-	-	-	-	-	-	2
	14. Commercial Law	-	-	-	-	-	-	-	-	2
	15. Foreign Commercial Law	-	-	-	-	-	-	-	-	3
	16. Commercial Treaties	-	-	-	-	-	-	-	-	2
	17. Commercial Opportunities (optional)	-	-	-	-	-	-	-	-	2
	18. Commercial Ethics (optional)	-	-	-	-	-	-	-	-	2
	19. Commercial Credits (optional)	-	-	-	-	-	-	-	-	2
	20. Insurance (optional)	-	-	-	-	-	-	-	-	2

*Statement of courses that can be given under various appropriations.*

With a grant of from \$10,000 to \$12,500, the following courses can be given :—

- 1. Commerce 4, 5, 6, and 7 (Economic Geography, History of Commerce, Commercial Geography).
- 2. Commerce 14 and 15 (Commercial Law).
- 3. Commerce 1 (Principles of Accounting).
- 4. Commerce 10 and 11 (Transportation and Shipping).
- 5. Commerce 13 (Study of Commercial Products).
- 6. Commerce 16 (Commercial Treaties).

These courses, added to the various courses in Modern Languages, in English, in History, in Political Economy, in Administration, in Diplomacy, in International Law, in Constitutional Law, and in Sociology, that are already given in the University, would make a good course in Commerce and Finance.

With a grant of \$16,000, the following additional courses could be offered :—

- 1. Commerce 12 (Technique of Trade and Commerce).
- 2. Commerce 2 (Banking Accounting).
- 3. Commerce 19 (Commercial Credits).

With a grant of \$20,000, the following additional courses could be given :—

- 1. Commerce 17 (Commercial Opportunities).
- 2. Commerce 3 (Railroad, Corporate, and Public Accounting).
- 3. Commerce 18 (Commercial Ethics).
- 4. Commerce 20 (Insurance).
- 5. Commerce 8 and 9 (Commercial Theory).
- 6. Colonial Administration.

## PLAN II.

This is framed so as to make as large use as possible of existing courses of instruction in Columbia College, as well as to take advantage of the best European experience on this subject. Courses to be established, amounting in all to 21 hours per week, are indicated with a star (\*).

## FIRST YEAR.

		<i>Hours.</i>
<b>RHETORIC A.</b> —Rhetoric and English Composition - - -		3
Purely an introductory course, intended to teach correctness and clearness of expression, and to give the student practice in the more elementary kinds of composition.		
<b>CHEMISTRY I.</b> †—General Inorganic Chemistry - - -		4
Introduction. Laws of chemical combination, history, occurrence, preparation, and properties of the elements and their principal compounds. Laboratory practice comprises the preparation, physical and chemical properties and tests of the principal inorganic elements and compounds.		
<b>HISTORY 2.</b> —Continental European History, modern and contemporaneous - - - - -		2
<b>GERMAN A.</b> —Elementary Course - - - - -		
Intended to familiarise the student with the syntax and common vocabulary of the language, so as to enable him to read ordinary German at sight.		
<b>FRENCH A.</b> —Elementary Course - - - - -		
The work will consist of a careful study of French grammar, both elementary and advanced, and of French syntax. In connection with the grammar, translation will be taken up, beginning with simple French texts.		
<b>SPANISH I.</b> —Elementary Course - - - - -		
In this course the study of Spanish is taken up from the beginning, stress being laid on the acquisition of a correct pronunciation, and of a careful knowledge of the facts of the language. The student's energy is concentrated chiefly upon the attainment of a full and accurate reading knowledge, to which end the study of grammar is subordinated, though made systematically to contribute.		
<b>ITALIAN I.</b> —Elementary Course - - - - -		
Primarily designed to prepare beginners for the study of Italian literature. In a secondary and subsidiary way it is also designed to drill them in the practical use of the language.		
<b>COMMERCE I.</b> *—Accounting - - - - -		3
Principles and practice of financial and commercial book-keeping, accounting, and arithmetic.		
<b>Total</b> - - - - -		15

\* New courses to be established.

† Additional work in the Laboratory.

SECOND YEAR.		Hours.
RHETORIC B.—Practice in writing English	- - -	1
This course consists of a series of graded themes, so arranged as to give the student practice in all the principal kinds of prose composition.		
CHEMISTRY 24.—Industrial Chemistry. General course	-	4
The subjects discussed are :—(1.) Air : nature, sources of contamination, sewer-gas, plumbing, draining, disinfection, ventilation. (2.) Water : composition of natural waters, pollution, disposal of sewage and house refuse. (3.) Artificial illumination : candles, oils, and lamps, petroleum, gas and its products, electric light. (4.) Limes, mortars, and cements. (5.) Building-stones : decay and preservation. (6.) Timber and its preservation : pigments, paints, essential oils, varnishes, preserving processes. (7.) Explosives : gunpowder, gun-cotton, nitro-glycerine. (8.) Glass and ceramics. (9.) Electro-metallurgy. (10.) Photography.		
HISTORY 4.—History of the United States to the close of the Reconstruction (1877)	- - - - -	3
GERMAN, FRENCH, SPANISH, or ITALIAN	- - - - -	3
COMMERCE 2.*—Economic Geography	- - - - -	3
The effect and influence of climate, soil, elevation, land distribution, etc., on natural products, trade routes, commercial exchanges, etc.		
Total	- - - - -	14
THIRD YEAR.		Hours.
ECONOMICS I.—Economic History of England and America	}	3
This course studies primarily the economic history of England, as affording the clearest picture of the evolution of economic life from primitive society to the complicated mechanism of modern industrial life. Incidentally a comparison is made with the contemporary movements in other European countries. Beginning with the seventeenth century, attention is directed to facts of American economic development, and the last part of the course is devoted exclusively to the study of the economic and social conditions underlying the history of the United States.		
ECONOMICS A.—Outlines of Economics	}	6
Text-book and lectures on the evolution of the modern economic organisation, the principle of economic freedom and the institution of private property.		
COMMERCE 3.*—Commercial History and Geography	- - -	6
History of commerce ; commerce and trade development of the several nations ; progress of invention and discovery ; colonial settlement and development ; history of tariffs and imposts, etc., two courses.		
COMMERCE 4.*—Transportation and Shipping	- - -	3
Historical and comparative ; processes, documents, and records ; making and interpretation of trade statistics ; system of weights and measures, etc.		
ELECTIVE COURSES	- - - - -	3
Total	- - - - -	15

\* New courses to be established.

\* New courses to be established.



FOURTH YEAR		Hours
ECONOMICS 3.—Practical Political Economy	- - - - -	3
A more detailed study of markets, money, banking, international trade, capital and labour, etc.		
SOCIOLOGY 17.—Statistics and Sociology	- - - - -	2
This course is intended to train students in the use of statistics as an instrument of investigation in social science. The topics covered are: Relation of statistics to sociology, criteria of statistics, population, population and land, sex, age and conjugal condition, births, marriages, deaths, sickness and mortality, race and nationality, migration, social position, infirmities, suicide, vice, crime, nature of statistical regularities		
SOCIOLOGY 18.—Statistics and Economics	- - - - -	2
This course covers those statistics of most use in political economy, but which have also a direct bearing on the problems of sociology. These include the statistics of land, production of food, condition of labour, wages, money, credit, prices, commerce, manufactures, trade, imports, and exports, national wealth, public debt and relative incomes.		
COMMERCE 5.—Commercial Law	- - - - -	6
Including elements of jurisprudence, contracts, real and personal property, agency, bailments and carriers, negotiable paper, trusts, bankruptcy, etc., in outline, two courses.		
ELECTIVE COURSES	- - - - -	4
Total		15

Among elective courses should be—  
Such courses in English, French, German, Italian, Spanish, Mathematics, Mechanics, and Physics, as the student is competent to take, and

	Hours.
ANTHROPOLOGY 1 (General Anthropology) - - - - -	2
CHEMISTRY 2 (General Inorganic Chemistry) - - - - -	2
Two conferences and two afternoons in laboratory.	
CHEMISTRY 25 (Industrial Chemistry) - - - - -	4
CHEMISTRY 26 and 27 (Industrial Chemistry) . - - - -	6
ECONOMICS 4 (Science of Finance) - - - - -	2
ECONOMICS 5 and 6 (Fiscal and Industrial History of the United States ; Railroad Problems) - - - - -	2
ECONOMICS 8 (History of Political Economy) - - - - -	2
ECONOMICS 9 and 10 (Laws of Distribution) - - - - -	2
ECONOMICS 11 and 12 (Social Reform) - - - - -	2
ENGLISH 1 (General History of Literature) - - - - -	3
ENGLISH 11 (Nineteenth Century English Literature) - - -	3
ENGLISH 16 (American Literature) - - - - -	2
RHETORIC 1 and 2 (English Composition) - - - - -	3
GEOLOGY 1† (General Geology) - - - - -	2
GEOLOGY 2 (General Geology) - - - - -	3

† Additional work in the Laboratory.

	<i>Hours.</i>
GEOLOGY 3 (Economic Geology) - - - - -	3
PHILOSOPHY A and 9 (Psychology : scientific method) - -	3
PSYCHOLOGY 1 (Introduction to Psychology) - - - -	2
PUBLIC LAW 1 (Comparative Constitutional Law) - - -	2
PUBLIC LAW 6 and 7 (History of Diplomacy) - - - -	2
PUBLIC LAW 8 (International Law) - - - - -	2

This course of study, it will be observed, gives 21 hours, or (approximately) one-third of the student's whole time, to courses specially designed to fit him for intelligent participation in commercial life. It leaves 7 hours to be apportioned, as he wills, to subjects of a general character. The remaining time is devoted to the study of English, of European and American history, of general and industrial chemistry, of modern languages, and of economics, with a view to giving the student a broad and liberal general training that will at the same time provide him with a fund of information immediately useful in commerce. Some instruction, specially designed for this course, is included from the first year, in order that the practical benefits of the course may not appear to students to be unduly postponed.

*Cost.*—With a grant of from \$10,000 to \$12,500 per annum, this course could be established and carried on.



## SOME NOTES ON AMERICAN UNIVERSITIES.

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During the present year (1901) it was the good fortune of the writer of this article to spend some weeks at the University of Wisconsin in the United States, engaged in lecturing to the students of the "Summer School" there. He has also had opportunities, both in the course of his visit to the United States and in other ways, of becoming acquainted with the work of some other American institutions of the same kind; and as a graduate of the oldest English university he could not fail to find many interesting points of comparison and contrast.

The University of Wisconsin is a State institution, intended to be the crown of a State system of education. It is admirably placed at the capital, Madison—a pleasant little city between two considerable lakes, which give abundant means of recreation. It is far enough from a large city to enjoy academic quiet; it is near enough to Milwaukee (the most populous city of Wisconsin) and Chicago not to be entirely out of the movement of affairs. Though Madison is the State capital, its political life is not active, for the legislature meets only once in every two years, and the work of the State Government is not sufficiently important to make it an object of much interest. The State Judiciary has its seat at Madison, which may best be described as a legal and academic centre.

The population of Wisconsin is not large, somewhere about two and a quarter millions, but it has provided well and even generously for its university. The institution apparently has no difficulty in obtaining frequent increases of funds from the State Legislature, if only it can show reasonable cause for the application. And it must be remembered that these contributions, very considerable as they are, only represent a part of the State endowment of education, for there is a complete system of primary and secondary schools leading up to the university.

The institution has developed with great rapidity, both in equipment and in the number of its students, during recent years. It now possesses new and satisfactory buildings for its law school and for its technical schools of science, engineering, and agriculture; and its most recent acquisition is a fine library building, erected out of State funds for the joint use of the university and the Wisconsin Historical Society. Most of these buildings are grouped around the "campus," on the gradual slope of a hill which overlooks the larger and the finer of the two lakes, and commands a good view of the city; and though no one of the buildings, except, perhaps, the new library, lays claim to any outward architectural merit, yet the general result is very effective and attractive. The university also possesses a small but admirable observatory, the result of a private benefaction. The

number of students is increasing fast; last year it reached nearly two thousand five hundred, including students of the Summer Session and the School of Agriculture, and they are drawn from all classes of the community. The teaching staff is strong and is frequently increased.

The university is very popular in the State, and one reason for the readiness of the legislature to furnish all necessary supplies for it is to be found in some special services which it has been able to render. The southern part of Wisconsin is a specially agricultural district, where dairy farming is a very important occupation. The university has recently secured the establishment of a School of Agriculture, which is well equipped and does good work. It has been able to advise the farmers as to new methods of dealing with agricultural pests, and it also serves them as an experimental station. One of the professors has placed freely at the disposal of the public his inventions in regard to the testing of milk. In these ways the farmers have received some practical and obvious benefits from the State university, and are therefore solid in its support. Another reason for the special interest in educational matters shown by the State generally may be the presence of a very large German and Scandinavian element in the population, for the Germans at least carry their educational traditions with them.

But it must not be supposed that these are the only reasons, or that Wisconsin is an exceptional instance. Probably nothing in the United States impresses an observer from an English university more than the enthusiasm everywhere shown for education—though it may not always be tempered by wisdom or result in the adoption of the best methods. He particularly notes the constant private benefactions and the activity displayed nearly everywhere in the foundation of State universities. This latter feature is perhaps most conspicuous in the new western States; some of them have hardly been formed, and certainly have not settled down before they have gone to work to create what is intended to be an academic centre for the State. Thus Washington, only incorporated in 1889, has its university at Seattle, on the Pacific coast. Such action has of course been dictated partly by inter-State rivalry, but chiefly it has been inspired by real educational zeal, by the desire of the community to keep its most promising students within the State, and to provide for the training of the teachers who will be needed to meet the growth of population. Wisconsin probably ranks third amongst such institutions—its neighbour, Michigan, would generally take place before it, and Pennsylvania would certainly come first; but these are only the most conspicuous examples. It is natural that many of these State foundations, like many of the innumerable universities and degree-giving colleges established by private action or by religious denominations, should still be in a decidedly undeveloped condition; but rapid progress is being made. There was a time, not very long ago, when it could be said with perfect truth that, "if we define a university as a place where teaching which

puts a man abreast of the fullest and most exact knowledge of the time, is given in a range of subjects covering all the great departments of intellectual life, not more than twelve, and possibly only eight or nine of the American institutions would fall within the definition. Of these, nearly all are to be found in the Atlantic States."\* Without stopping to inquire how some of our most famous English universities would fare if tested by this somewhat severe definition, it may be remarked that the statement contained in the last sentence is becoming less and less true. There are State institutions in the middle and even the western States which are beginning to compete seriously with the universities of the East, and there are great private foundations, like Chicago and Leland Stanford. The East is no longer to have a monopoly. It must necessarily be a considerable time before these new institutions can compete with the older ones on anything like equal terms, except where, as in the case of some private foundations, they have almost unlimited funds at their disposal. And in the latter case the attempt to erect a university complete in all departments at a single stroke may not have quite the anticipated results. But the new institutions undoubtedly have great careers before them. One advantage the State universities have in the newer States; being early in the field they may be able to check the rise of those small institutions which have rather brought discredit upon academic degrees in the United States. And the American Commonwealth is so vast that it must have many "intellectual centres"; no group of States can monopolise the intellectual life of the Union. And it is in this matter, if in no other, that the opportunities of the new universities are so great.

In most of the institutions founded and endowed by States the fees are very small; in many cases they are little more than nominal. Thus at Wisconsin a student who is a resident of the State pays six dollars a semester, or twelve dollars a year (the academic year is divided into two semesters); in the technical schools the fees are the same, but there are special laboratory fees. There is also a special fee of one hundred dollars for the Law School, which, however, is chiefly a graduate department. So in the State universities of Ohio, California, Colorado (to take only casual instances), the fees for students resident in the State are scarcely more than at Wisconsin—in some they are apparently less. In every case the fees for students not of the State are higher, though still much smaller than in the great "private" universities. At Wisconsin the fees for students not resident in the State are only about sixty dollars a year; at Harvard the ordinary fee is one hundred and fifty, and it is about the same at Columbia and Yale. This free tuition at the State universities has some great advantages; particularly it puts a university education, or at least the best the State has to offer, within the reach of everyone, and throws the institution open to students of all classes of society. On the other hand,

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\* Bryce, "American Commonwealth," II., p. 667 (ed. 1895).



it may be doubted if a university course should be made too easily attainable; there is a temptation to students to take it, whether it is of use to them or not. If universities are to be open to all persons who present themselves, it is right that good students should not be excluded by lack of financial means; and if all the money (or the greater part) for the support of the institution comes from the State, the free opening is perhaps inevitable. Probably the ideal thing would be to make ability and scholarship (in the widest sense) the requirement for admission, and then by a well-managed system of studentships to secure that no pecuniary difficulties should exclude an able student. But that is perhaps utopian, and the next best thing is the policy pursued by these American State institutions. It does not seem likely that universities of the older type, what may be called the "private" foundations, will suffer much from it, and from the rivalry of these free institutions. Perhaps many of the smaller "universities," which are really only colleges, will be forced out of existence, or become merged in the larger ones, but that will scarcely be regrettable. But the great "private" universities, like Harvard and Yale, are not likely to be affected; they appeal, as Oxford and Cambridge in England, to special classes, which will continue to go to them, even though an equal education can be obtained at a smaller cost elsewhere. Social reasons, if no other, will continue to dictate the choice. But this does not mean that the higher social classes all refrain from making use of the State universities; it has already been remarked that all classes of the community furnish the students.

In the "public" institutions as a whole the men and women students are on precisely the same footing. In the University of Wisconsin they are in a position of perfect equality, and their intercourse is almost entirely unrestrained. The only difference is that the university has a hall of residence for women (which accommodates only a small proportion), and no such residence for men. It has no so called "dormitories," that is, large halls containing students' rooms, such as exist at Harvard, Chicago, and elsewhere. In the controversy as to the relative merits of the two systems of education—co-education, where the two sexes receive the same training in the same institutions, and co-ordinated education, where parallel training is given in separate institutions—the State universities have been placed squarely on the side of co-education. The "private" foundations, on the other hand, are divided on the subject; some, like Chicago, adopt the system of co-education; others, like Harvard, are opposed to it. So far as a visitor can judge, the system appears to work with perfect smoothness at Wisconsin in all that relates to the actual work of the university—though it may be remarked that the women on the staff are very few in number. As to the social results, the reliable opinion seems to be that the almost unfettered intercourse of the men and women students does not produce any harmful effects. Nor, on the other hand, does it apparently serve to any extent as a social

training, for after all it must be remembered that there are only a comparatively few students who have any chance of participating in this social life.

In fact, to a member of one of the older English universities the American institutions probably appear to be weakest on the social side. Though if he considered the situation at home he would remember that the social activities from which he has so greatly benefited, and which were a large part of his university life, are limited to two universities, Oxford and Cambridge, in which they are the product of very unusual circumstances and traditions; in other English institutions they are much less prominent. In the American universities there are, as with us, innumerable societies of all kinds; some of them—particularly those which take their names from mystic combinations of Greek letters, like the Phi Beta Kappa—are lodges of secret (but, happily, not revolutionary) societies, which extend over most of the universities of the Union. The societies are flourishing, and they discharge a most useful function in taking the place of our Oxford and Cambridge colleges as the bonds of union between students of different generations. But all such societies are naturally self-centred. And the chief fault in the social organisation of many of the American universities (it would be unfair to say of them all) seems to be the absence of opportunities for the social meeting of teachers and students. But it must be admitted that this is not altogether the fault of either party; it is the result of many things. In a number of the State universities, and in others, perhaps, to a less extent, there are large numbers of students who have not had the preliminary training which would enable them to make use of such opportunities if they existed. And in some cases attempts made to remedy this defect have hitherto not met with much success. Here, again, it is difficult for an outsider to express an opinion, but there would certainly appear to be room for much more effort of the kind.

Of the general character of the student life the present writer has not sufficient knowledge to enable him to speak in detail. The general impression upon his mind is that it is at least as fresh and vigorous as that of English undergraduates, though it is limited in various ways which have already been indicated. The cult of athletics is not so highly developed; the games seem to be undertaken less from motives of pure sport, and they are not shared in by so large a proportion of the students. One difficulty is, of course, the absence of the keen rivalry within the university which results in Oxford or Cambridge from the college system; and for the same reason there are fewer opportunities and calls for a large number of men. Of the intellectual life it is still more difficult to speak. It is free from some affectations which are apt to mar English undergraduate life; it is perhaps more crude and more inclined to follow closely the lines of the students' academic work. It seems also to be generally admitted that the ordinary student who goes up to an American university is not generally by any means so well prepared as a boy who at eighteen or nineteen

leaves an English secondary school. That means that more elementary work often has to be done in the first year; it means also that a student's mind is less developed, that he has less independence of thought and taste. Of the majority of the American institutions, though not of the oldest and best, it must be said that they afford fewer opportunities than are desirable for those intellectual pursuits, apart from one's direct work, which are the most important force in the formation of cultured men and women.

To come to the more immediate task of the university, to its academic work. The "Summer Session" is a fairly common institution, and Wisconsin may furnish us with an example. It begins there almost immediately after the close of the second semester of the academic year; that is, at about the first day of July, and lasts six weeks. It is a separate session, and members of the academic staff are not bound to take part in it; those who do so are reinforced by lecturers from elsewhere. Attendance at the courses given during the session counts towards the degree. The student-attendance is composed partly of high-school teachers desirous of continuing their studies and qualifying for promotion, partly of persons engaged in some special work, and partly of ordinary students of the university who may wish to take their degrees in as short a time as possible. There may of course be many reasons for this wish, but an important one is that students who propose to take the professional (post-graduation) schools, such as Law, do not want to spend more time than is absolutely necessary in the attainment of the preliminary degrees. Almost everywhere there is a tendency to lengthen the period of study required in these professional schools, and a desire amongst students to shorten the earlier course. Various universities therefore allow the Summer Session to count towards a degree. Chicago University has adopted a different method; the academic year is divided into four quarters, and a student is only required to attend during three. But should he choose to take the four, with only brief holidays, he may do so, and thereby reduce the number of years over which his undergraduate course extends from four to three. There can be no doubt that the Summer Session at Wisconsin meets a real demand. This year the attendance was higher than on any previous occasion; between four and five hundred students entered. Of these a very considerable proportion were school-teachers, and it naturally followed that a number of the courses given throughout the session were particularly adapted to their requirements; and there were special courses upon the principles of teaching. There are certain objections to this, and amongst others the fact that it encourages students to study in a way calculated to produce the greatest results with the least possible amount of work. But probably the advantages which the session confers on many students outweigh the evils, and it is very evident that they are much appreciated. One hears many instances of sacrifices made by teachers and others to enable them to attend, and the present writer knew several cases of students who supported themselves during the

session by waiting at table and doing other work in the boarding-houses of the city.

The reference made above to the professional schools suggests another noticeable point; that is, the attempt of many of the universities to provide instruction of a directly practical nature in various departments—instruction which shall send the students out capable of commencing the practice of the profession which they may have chosen. Of course, in a number of cases this is done very imperfectly, but there are numerous instances where the object is on the whole satisfactorily attained. Thus the University of Wisconsin, as already indicated, sends its students out well-equipped for the practice of law, and of technical pursuits such as engineering. The agricultural work stands naturally on a different footing. A departure of importance in this connection is the recent establishment of a school of commerce, which proposes to train students for a career in the higher departments of business just as the Law School trains them for a legal career. Other universities have recently founded similar schools, and the working of the experiment will be watched with great interest. It is stated at Wisconsin that the establishment of the school (not much more than a year ago) has already attracted to the university a number of young men who would otherwise have gone directly into business. Other universities have, of course, still more professional departments, such as schools of Medicine and Dentistry. In all this there is of course no comparison with Oxford and Cambridge, in which a curiously limited meaning is still attached to the term “university education”; the comparison must be with the newer English universities. It is unquestionably right that the universities should thus extend the range of subjects in which they offer instruction; the one danger is that in the desire to bestow practical benefits on their students they will lose sight of what is no less their task—the promotion of general culture.

In the matter of the work required for the degrees there is a controversy still raging between the advocates of compulsory courses of study and the supporters of the free choice. In cases where the latter policy has prevailed the plan usually adopted is to prescribe a limited amount of studies, and beyond that to allow the student to select freely any courses which he may wish to attend. In various cases a student has to be guided by the advice of a professor or instructor in his choice, sometimes only in his first year, sometimes in all years. The prescribed work is naturally greatest in the first year, and then usually ceases with the third year. In his courses which are not prescribed a student can follow his natural bent. The first degree is not given by a great final examination in a definite group of connected subjects, or even on work in several examinations; but it depends on adequate attendance at a certain number of courses of lectures together with satisfactory work in a brief examination at the end of each. So at Wisconsin a certain amount of credit is given for each course, not more than a certain amount of credit can be obtained in any

one semester (however many sets of lectures a student may choose to attend), and a fixed total is necessary to secure the degree. The professor or instructor naturally prescribes a certain amount of reading in connection with his lectures, and he occasionally devotes an hour to a *vivâ-voce* examination in his class, in order to see if the work is really being done.

This system of elective studies with frequent examinations has taken a strong hold in the United States, and requires some consideration. Its chief advantages are these. In the first place it gives a student's personal tastes free play; by freeing him from the obligation of studies which may be distasteful it leaves him more time and energy to devote to studies for which he has a natural inclination, and in which he is therefore likely to do better work. And, secondly, it does not stake everything upon a single examination; and it allows of a juster estimate of the work of a student who, though industrious and capable, may not be at his best in examinations. These arguments in favour of the elective system are good as far as they go, but there are grave objections. It does not provide for a connected course of work for all students, and there can be little doubt that the study of a prescribed group of kindred subjects, even if some of them are distasteful, is a better intellectual training than a set of miscellaneous studies; the latter is not likely, in the case of the ordinary student, to promote exact knowledge. The elective method also encourages those students who desire to get a degree with as little trouble as possible to take what are known as "snap" courses; that is, courses which from the nature of the subject of which they treat, or from the known character of the professor, are likely to necessitate a minimum of work. And the terminal examinations allow of "cramming"; it is easy to "cram" for an examination on a single course of lectures, but it is much more difficult to do it for an examination on work in a number of subjects spread over a period of two years. And in these terminal examinations, each conducted by the particular lecturer, it must always be difficult to get any consistent and general standard throughout the university. On the whole, an English student will probably prefer his own system.

As the Wisconsin arrangement combines both prescribed and elective studies, it may be described here. The candidate for the B.A. degree is required to select on entrance one of four "courses," called respectively English, Civic-Historic, Modern Classical, and Ancient Classical; he chooses the one containing the subjects he specially desires to study. The subjects in each course are so arranged as to cover four years, and average about fifteen hours (of lectures) a week. A student who enters any course is supposed to continue in that line of work during the four years, though it is possible under certain circumstances to make a change. All the work of the first year is prescribed; in the second about half is compulsory. In the remaining two years the subjects are elective, with the exception that the student must follow what is called his "major" subject during those years also.



For example, in the Ancient Classical he would have to continue Latin or Greek; in the Civic-Historic he would have to continue Political Science or History. The object of this regulation is of course to secure something like continuity in the student's work even amidst the elective studies. The professors act as class officers for the different courses, and advise the students in making their choice. The B.A. degree is given without honours (at Wisconsin; elsewhere the practice varies), but a candidate must reach a certain grade. Thus, if the possible marks for attendance at a course of lectures and work in the examination be 100, a student must obtain at least 60 in order to obtain a pass. But if in all his courses he obtained only about 60 he probably would not be given the degree.

Probably the actual results of the compulsory and elective systems do not differ so very much in the case of the best students. A man really interested in his work, and really desirous of making something of it, is fairly certain to take a definite group of subjects, for he will always choose those which bear on his main interest. And, of course, in the professional schools practically all the work is prescribed. The disadvantages of the elective method will probably be most felt in the case of those students (nowhere inconsiderable in number) who go up to the universities without any definite interests or intentions. For such students, if the university is really to have any formative influence upon them, a stricter method seems absolutely necessary.

One of the most interesting parts of the academic organisation in the United States is the arrangements made for graduate work. This is general in the universities, or at least in all of any importance. In no case does a university limit this work, and the opportunities which it offers, to its own graduates; students come from smaller universities and colleges. They may be admitted on equal terms; it depends chiefly on the relative standards of the institution from which they come and the university in which they propose to do graduate work. The latter may require a certain extra amount of preliminary studies before it permits the students from outside to take the graduate courses. No higher degrees are given in American universities without additional work, like the Oxford and Cambridge M.A.; the common requirement for the masterate is a thesis on some special part of the candidate's work, together with a written or oral examination, or both. In Wisconsin the degree of M.A. can be taken after one year's graduate work along the line of the "major" subject taken in the study for the bachelor degree. One "minor" subject is also required. Thus a candidate who had taken the Civic-Historic course could for the M.A. take American History as his "major," and on some subject in that he would write the thesis, which is supposed to contain some research work. For his "minor" he could take Political Science.

The chief American universities give the degree of Doctor of Philosophy, or other doctorates for research work, and the requirements are usually severe, though they vary with the different universities. Some degrees rank higher than others, as they are



more difficult to attain; special institutions are noted for the quality of their work, and come to be regarded as centres of research. This is the case with John Hopkins University at Baltimore (the pioneer research institution), Columbia, and some other great eastern universities. A candidate is usually required to present an elaborate piece of original work, and to supplement this by an examination intended to test not merely his knowledge of his special subject, but also his general learning and capacity. Such an examination may be very severe, and it is probably the variation in the nature of these examinations that causes the difference in the value of the doctorates given by the various universities. Harvard in particular has a reputation for severity. The length of time required to be spent in study is not everywhere the same, but the average is about three years.

It will be apparent that in all the arrangements for research work the United States is much under German influence; and it is greatly to be regretted that England should be so far behind. In spite of the advanced degrees given at most of our universities, and in spite of the establishment in recent years of degrees avowedly for research by Oxford and Cambridge, there is still no place where organised research work is carried on in England. And English students have made little use of the great opportunities for such work offered by the German universities. Large numbers of American students have gone to Germany; they have taken back German academic methods, and they have now founded centres of research work in their own country. One disadvantage the system has, it tends to make a doctor's degree almost absolutely essential to a student who desires an academic post. The universities do not fill their posts by selection amongst candidates who support their applications by testimonials, but they invite persons whose work has made them known, and the easiest way for a man to become known outside his own university is the publication of his doctor's thesis. The result is rather to make published original work the test of fitness for an academic position, whereas it is not necessarily anything of the kind. The qualities which make a good investigator are not always those which make a good teacher, and the two are not always combined. And there are many admirable teachers whose published work is quite unimportant. But putting this aside, it must be said that the research work of the American universities is probably the part of their activity most worthy of study by those interested in academic progress in England. It must be admitted, however, that the material attractions to research and an academic career are far stronger in the United States than here. In England a student, unless he is fortunate enough to get a rare fellowship, has generally to depend on his own resources if he wishes to undertake research work; this is the case in all branches of study, though less so in science and medicine than in classics, economics, or history. And he can hardly venture to hope that the success of his research will ultimately secure to him an academic career; the available posts are so few. In America the rapid growth of universities, and the demands for teachers in them

—the fact that at no time is the number of appointments definitely fixed and limited—make it worth while for a good student to struggle for a few years; a fairly good post is practically certain at the end of that time. And during the period of work help is given by a considerable number of research fellowships.

The methods of teaching are worthy of notice chiefly in the case of the “seminar,” which is only now beginning to make its way in England. Modelled upon the plan adopted in the German universities, where it originated, its object is to bring together the advanced students of a particular subject into a group, which shall undertake a more or less elaborate piece of investigation under the guidance of a professor. It serves the students as a preliminary training in methods of research; it accustoms them to the weighing of evidence, and to the use and criticism of original authorities. A good student of history, for example, who has worked in a seminar, comes out of an important American university with far more knowledge of the “historical method” and much more acquaintance with the technique of historical investigation than is possessed by five out of every six men who have taken a first class in the Oxford History School. The best students thus get much more help and guidance; but probably the ordinary student gets much less supervision than the Oxford or Cambridge undergraduate. The amount of lecturing and seminar work done by professors and instructors renders it practically impossible for them to give real individual attention to any except their best men. The main reliance has to be placed on lectures, and throughout the universities the average number of lectures attended by each student is distinctly high (compare the fifteen hours a week instanced above at Wisconsin), and the opportunities for extensive private reading rather limited. But the ordinary American student does not think it necessary to devote so much time to the pursuit of recreation and the taking of exercise as the English undergraduate. It may be remarked here that the American universities, in many instances, think it their duty to provide a gymnasium and competent instructors.

A few words may be added in regard to the subjects of study. It is natural that in their curriculum the universities should reflect the particular interests of the nation. The practice, of course, varies, but probably it may be said with general accuracy that much less relative importance seems to be attached to the study of the “humanities” in American than in English universities. It may be that the tendency is to neglect them overmuch, in the desire to give instruction of which the use is more obvious and direct. National sentiment has, of course, caused great attention to be paid to American history, and the study has received a great impetus during the last few years. It seems to absorb all the energy of the younger historical students. Not merely the history of the Federation, but the history of each separate State, is being worked out with much care and minuteness, both on its political and constitutional sides. In the teaching of economics the English universities are far surpassed; an American student can obtain in any one of a number of univer-

sities a thoroughly good training in economics, and can attain to an intelligent appreciation of the relations of economic science to the actual phenomena around him. There is a wide and growing interest in the study, which compares favourably with the lethargy still exhibited in England, where a first class in history can be obtained at Oxford by a student who has got his political economy from Mill and his economic history from an elementary text-book ; and where in only one university can there be said to be an even fairly adequate course of instruction in economics.

Just as this study has been forced on the universities of the United States by the conditions amidst which they are placed, by the great industrial and commercial expansion of their country and the many problems which it presents, so another class of pressing questions has caused them to devote very much attention to political science on its practical side. They occupy themselves, that is to say, not merely with theories of government, or with constitutional forms, but considerably with the administrative methods in vogue in their own and other countries. In many universities there are professors or instructors whose task it is to lecture upon comparative administration ; and to meet the problems of the great cities (nowhere more acute than in the United States) there are some professors who are appointed to give instruction in the principles and practical working of municipal governments. An English lecturer on these subjects finds that he can recommend to his students works by French, German, and now a rapidly increasing number of American writers, and hardly a single book of any importance by an Englishman. The study of administration and municipal government, both generally and in relation to the actual conditions of American life, cannot fail ultimately to have a most beneficial effect on political conditions in the United States, and might with great advantage be imitated in this country.

In the two departments of study just described, as in others of a more technical nature, the American universities have attempted to bring themselves into touch with the actual problems of the national life, and to send their students out equipped to meet everyday needs. The old English universities have hitherto had another ideal ; the newer ones must inevitably tend to greater similarity with the institutions across the Atlantic. If they are to flourish, they must make the national ideals their own ; they must refine, not reject them. The American universities are adapted to the national life and ideas, and that is the cause of their prosperity and strength. Their number, the way in which they are open to all, and their advantages placed within the reach of all students, enable them to play a far more important life and to exercise a greater influence in national movements than our English universities have done as yet. These responsibilities are already heavy, and must become every day more severe ; and the universities are proving themselves neither unwilling nor unable to bear them.

PERCY ASHLEY.

November, 1901.

## TABLES SHOWING THE CHIEF RECENT BENEFACTIONS TO HIGHER EDUCATION IN THE UNITED STATES.

The information contained in the following Tables has been made available through the kindness of Dr. Nicholas Murray Butler, President of Columbia University, who has forwarded to the Office of Special Enquiries the details supplied to him by the Hon. W. T. Harris, United States Commissioner of Education. Dr. Murray Butler remarks that the sums named may be taken with confidence to represent the *minimum* amount of benefactions to higher educational institutions, and adds that no account has been made of gifts to libraries and museums. The benefactions named in Table B. are included in the amounts given in Table A.

TABLE A.—Total Amount of Benefactions reported in

	£								
1890-91	-	-	-	-	-	-	-	-	1,515,018
1891-92	-	-	-	-	-	-	-	-	1,336,917
1892-93	-	-	-	-	-	-	-	-	1,343,027
1893-94	-	-	-	-	-	-	-	-	1,890,101
1894-95	-	-	-	-	-	-	-	-	1,199,645
1895-96	-	-	-	-	-	-	-	-	1,810,021
1896-97	-	-	-	-	-	-	-	-	1,678,187
1897-98	-	-	-	-	-	-	-	-	1,640,856
1898-99	-	-	-	-	-	-	-	-	4,385,087
1899-00	-	-	-	-	-	-	-	-	2,399,092
1900-01	-	-	-	-	-	-	-	-	3,608,082

TABLE B.—Benefactions to certain Institutions.

Institution.	Date.	Donor.	Amount.	Object.
DREXEL INSTITUTE	1891	Anthony J. Drexel	£ 400,000	Endowment.
" "	"	" "	200,000	Building and Equip- ment.
UNIVERSITY OF CHICAGO	1889	J. D. Rockefeller	120,000	Endowment.
" "	1890	"	180,000	Endowment.
" "	1890	"	20,000	Building of Divinity School.
" "	1892	"	400,000	Endowment.
" "	1893-5	"	80,200	General purposes.
" "	1896	"	200,000	Endowment.
" "	1900	"	400,000	Endowment.
" "	1900	"	25,000	General purposes.

NOTE.—The value of the dollar has been estimated at four shillings.

TABLE B.—Benefactions to certain Institutions—*cont.*

Institution.	Date.	Donor.	Amount.	Object.
UNIVERSITY OF CHICAGO - — <i>cont.</i>	1895	Miss Helen Culver -	£ 200,000	Biology.
"      "      -	1901	Mrs. Emmons Blaine -	200,000	Buildings and Endow- ment of School of Education.
COLGATE UNIVERSITY -	1891	James B. Colgate -	200,000	Endowment.
COLUMBIA UNIVERSITY -	1895	Seth Low - - -	200,000	Library.
DARTMOUTH COLLEGE -	1899	Edward Tuck - -	60,000	Building { of School of Administration and Finance. Endow- ment
"      "      -	1901	"      "      - -	20,000	
LELAND STANFORD UNI- VERSITY.	1899-00	Mrs. Leland Stanford -	2,200,000	
WASHINGTON UNIVERSITY, ST. LOUIS, MO.	1900-01	Samuel Cupples and Robert S. Brookings	600,000	
HARVARD UNIVERSITY -	1901	J. Pierpont Morgan -	200,000	For buildings of Medi- cal School.
CARNEGIE INSTITUTION, WASHINGTON, D.C.	1902	Andrew Carnegie -	2,000,000	

NOTE.—The value of the dollar has been estimated at four shillings.

## A CONTRAST BETWEEN GERMAN AND AMERICAN IDEALS IN EDUCATION.

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### I

Every nation may be said to have the system of education which it deserves. That is to say, a national system of education is the outcome of national history and a sure index of national character. Where, as with us in England, two contending ideals of government and of social policy have for many generations (though of course under changing forms), divided the nation into two nearly equal parts, the educational system will itself either be virtually bipartite or a rather ineffective and unpopular compromise. Where, as in France, religious opinions are polarised, there will be a cleavage in national education along the line which divides ecclesiastical sympathies from anti-ecclesiastical. A system of education, or the loose aggregate of schools which in some cases serves as a system, reflects the things for which the nation cares and which it seriously wants to keep. Germany has long cared for learning, and learning is secured by its schools. She now cares a great deal for commerce, and commercial considerations are not forgotten by those who decide what her schools shall teach. America cares that her citizens should be good Americans, and the symbols of a common nationality are conspicuous in her schools. She also cares very deeply for freedom of individual development, and the desire to secure this freedom is the chief characteristic of her education. We care very much for fairness of mind and for toleration of discordant opinions; and the avoidance of anything which might impress one-sided views on the rising generation is, as a rule, especially characteristic of our schools. Indeed, it has in some cases hampered their intellectual efficiency, as for example by causing in them much neglect of history as a means of forming definite national convictions and definite national aims. We have long taught "history" in our schools, but with a good deal of care to let sleeping dogs lie. In countries, like Prussia, where one conception of the State has been dominant, the national system of education may be almost geometrically neat, avowedly propagandist of certain social opinions, a well-designed and economical piece of mechanism with interchangeable parts. In others, local option and cantonal variety, though by no means incompatible with a very strong sense of national unity, may be, as in Switzerland and America, the most appropriate administrative expression of the national mind. With us, among whom is a remarkable intermixture of strong, or potentially strong, opinions, various types of schools have naturally sprung up, each type laying special stress on some special aspect of education, though not necessarily neglecting the rest of it. Our school system is, so to speak, multi-cellular and well provided with safety valves. But it is less well adapted to get up a good head of steam.



The general form and tone of a national system of education are thus predetermined by national history and character. But national character may in turn be powerfully moulded to some extent by the work of the schools. National character may be greatly and quickly moulded externally under certain conditions of war and national emergency, and may be slowly and to a minor extent changed. The effect of national character is most striking when the school system is highly organised as a sort of educational monopoly under a strong central government and where the higher schools are imperatively made the only gateway into the professions. Like all other monopolies, a state monopoly of education is subject in actual working to the limitations imposed by public opinion. But it is undoubtedly the case that better training effectively organised on national lines may greatly influence public opinion and to some extent even affect national character. It may well that is to say, as an elastic stocking of a weak vein. Yet there are limits to this power. If the schools are directed to press certain views with strong insistence on the minds of the pupils, the aim of the Government may be thwarted either by passive resistance on the part of some of the teachers or by the levy of charges or by the reluctance of the rising generation to be so dominated with undue emphasis by authority. Such undue emphasis often produces an intellectual revolt and intellectual revolt is often interference. And those who argue that the next generation will believe what the schools teach in this are apt to forget that the work of schools (and especially of day-schools) is but a small part of the work of education. Social environment counts for much more than day-schools do. A child spends only a few hours a day at his lessons, but he learns a great deal during the hours when lessons are not going on. The influences of home life, of out-of-school organisations, of the public opinion are far more penetrating than ordinary school lessons which, of course, interfere in the world and necessarily enable school teachers to counteract these influences from outside. Furthermore, the extraordinary increase and improvement in means of communication have intensified international influences. Just as a school can be hermetically sealed against the currents of public opinion, so an national system of education can be shielded in part from penetrating and disintegrating influences from other countries. Commerce is the perpetual cause of these new and disturbing currents of international opinion. Year by year these international influences grow stronger. They are like this washing away the barriers which separate one people from another. At certain points they meet with stouter resistance than elsewhere. We see that some nations are much more resistant than others to foreign influences. But any nation that is so impenetrable has not history and culture have been so at many earlier times. Facts of the school system have been carefully organised as if with the special view of strengthening national feeling against foreign influences. Great stress has been laid on the teaching of patriotism of the mother

tongue, on national history, on national geography, on national unity. All this has told, and has made a deep impression on German sympathies. But the underlying national characteristics remain. Germany loves learning, and is equally interested in commerce. But learning is not national but cosmopolitan, and perpetually opens new doors to foreign influence. Commerce, again, is cosmopolitan in tendency, and the very studies which now are profitable for commerce, the learning to speak modern languages with fluency and idiomatic skill, and the study of other nations' needs and prejudices, themselves excite an interest in foreign ways of thinking, which is intensified by the long periods of residence abroad, so frequent now as the final stage of commercial education.

This drawing together of the different nations (which has led to a strong outburst of national sentiment, as if in self-defence) and their rivalry in the markets of the world, have drawn much attention to their various systems of education. Comparative study of those systems has revealed the fact that each is much more intimately connected with national history and character than was once understood. At one time, when nations were really more apart, it used to be thought that systems of education, or political constitutions, could be copied by one nation from another like systems of road-making or of ship-building. Now we realise that a national system of education is very intimately connected with national life. But—what seems at first a paradox—the least tidily organised systems are often more intimately associated with the structure of national society than are the very orderly systems. The fact that the latter are so orderly points to their having been artificially constructed rather than to their having grown up spontaneously, and to the nation which possesses them having been somewhat lacking in the stubborn tenacity, which is a cause of national backwardness but also of national strength, and which especially resists any extreme interference on the part of Government with so personal and private a matter as the education of the young.

Owing to virtual shrinkage of distance through improvements in means of communication, and in consequence of the increasingly close connection between those nations which are actively engaged in oversea trade, national systems of culture and of education are becoming far less separate than they used to be. Formerly there used to co-exist, even in the same country, and still more in the same continent, many singularly separate traditions of culture and of social aim which marked off one group of men from another, and made them practically (though of course not entirely) independent of one another. These differences still exist, but they have been blurred by the intermixture of races and of the different elements within each nation. This intermixture has been brought about partly by the influence of railways and other means of communication; partly by the effect of trans-oceanic competition on agricultural values and

the consequent drift from the rural districts into the towns; partly by the growth and extraordinary attraction of city life; partly by the fusing power of great military organisations and of compulsory military service, which bring masses of people under a common discipline and cause detrition of old ideas; partly (and some would say chiefly) by the movement of those great tides of opinion which are sweeping over the world, washing away many of the old landmarks and breaking through barriers which once resisted change. The effect of all this has been that many different traditions and social ideals, formerly separate and embodied in different institutions or preserved among different groups of people, have been rather suddenly and violently brought into collision with one another. The first result has naturally been effervescence, and a great confusion of intellectual and ethical ideals. Many, in despair of finding safety or clearness of conviction elsewhere, have been drawn back into older organisations which previously they had almost abandoned. Others, in order to find foothold somewhere, have pressed forward to extreme revolutionary opinions. Others have taken refuge in a sort of mystical or artistic quietism. In all countries the intellectual and moral tension is extreme. The effect of this tension on educational systems is naturally great, because education is necessarily concerned with the very questions at issue. Any effective system of education presupposes a clear conviction on the fundamental things. While, therefore, so many minds are troubled with extreme uncertainty about those fundamental things, education is necessarily in a state of profound unrest. The surface of it is agitated all over the world; and, if for the present there are signs of a return to the old routine, such reversion is likely to be little more than a temporary phase, just a clinging to the few well-jointed timbers which so far have held together in the storm.

In time, no doubt, the storm will abate, and we shall see more clearly the conditions which have to be faced. One great effect of the change now going forward will possibly be a weakening of purely national ideals and the greater significance of those elements in culture which are common to individuals in the same stage of development all over the world. We seem to be watching one of those great movements of opinion which make the world realise, in spite of the claims of national organisation and of concentrated wealth, that the claims of each individual are in some respects sovereign or paramount, and possess certain indefeasible rights as against government, or capital, or the community. But the problem is not how to secure the victory of either extreme—of extreme individualism or extreme Government control—but to discover some adjustment of the two forces; some combination of the two necessities in one working whole. And we can see this effect going on in the sphere of education more clearly than in any other department of life, because education is an epitome of the whole struggle, and because it furnishes opportunity for a great variety of independent experiments, and also is full of spontaneous growths.

In the educational movement which is beginning to excite more attention all over the world, there are three great representative nations, each typical of a somewhat different point of view and each contributing a different kind of experience—Germany, the British Empire, and the United States of America. Germany stands for unity based on the State; America for variety based on the individual; the British Empire for the attempt at moral unity based, partly on individual experience, partly on inherited tradition, partly on administrative organisation. All three have to face the same problem—each is learning from the other two; Germany and America have worked on the simpler theories, and have had the advantage of greater simplicity of aim. Ours is the more complex view, the least easy to define, and the most liable to ineffective compromise. But the facts themselves are complex, and, to me at least, it seems that the English tradition in education has, *at its best*, been nearer to the truth either than the German or the American. On the other hand, *corruptio optimi pessima*. English education, when it falls below the best, is far less effective in accomplishing its aim than are the American or the German respectively in accomplishing theirs. On a later page in this paper I shall try to indicate some points in which the educational aims of the three countries are drawing nearer together owing to the tasks of the three nations becoming in some respects more similar. But, before doing so, I will mention the points in which the German and American ideals of education are in rather sharp contrast.

## II.

Strictly speaking there is no "German system of education." Neither is there an "American system." There is no Imperial Minister of Education in Berlin. There is no Federal Board of Education in Washington. In educational matters the different States of the German Empire retain considerable varieties of organisation and even of aim, and in America there are very great differences both in administration and in organisation between the educational system of different States and cities. But if we make, so to speak, a composite photograph of the progressive parts of German education and a composite photograph of the greater part of American education, there stand out in each picture certain features which are in striking contrast. These may be arranged in an antithetical form as follows.

In Germany, the masses of the people have very little to do with determining the course of educational policy; in America, nearly all education rests on popular control. In Germany, educational progress is guided by administrative order; in America it depends much more on free discussion. In Germany, as a rule, the keys of the position are in the hands of a strong central authority; in America, there is very great local freedom. German society is organised on a military basis; American society on an industrial. In Germany, society is still

largely organised in horizontal strata; in America there is a much more vertical organisation and a much more open draught from the bottom to the top. Germany (and Prussia in particular) has a strong tradition in favour of direct State management of industrial and other concerns; in America (with considerable exceptions) the tradition is the other way. Germany has long possessed a highly expert, permanent civil service; with certain exceptions, American energy and ability have, until comparatively recent years, flowed in other channels. In Germany the great majority of teachers are men; in America the great majority of teachers are women.

In Germany, the earliest stages of primary education form the part of the national system which has shown the least capacity for fruitful development; in America, those very stages have been, and are, the most progressive, the most fertile in suggestion, and the most eagerly sensitive to new ideas. In Germany, the State guards the door to all professions; in America, the professions are wide open to all. In Germany, the secondary schools are deliberately made the sole avenues to professional life; in America, the organisation is far looser and less restrictive. In Germany, the secondary schools are (granted certain assumptions) the strongest element in the whole system of national education; in America, the secondary schools, though they are making remarkable progress, have hitherto been less conspicuously successful than the primary schools and the Universities. In Germany, comparatively little is done for the higher education of girls; in America, as much is done for girls as for boys. In Germany there is, for the most part, a social gulf between the teachers in elementary and the teachers in secondary schools: in America this gulf does not exist.

In Germany, the secondary schools are organised almost independently of the ordinary elementary schools, without any dovetailing of curriculum, and in such a form that clever boys have, as a rule, to leave the elementary school at nine years of age in order to enter the secondary school at the beginning of its quite different curriculum; in America, the great majority of the secondary schools are deliberately organised as the crown of the primary schools, and there is no "break of gauge" between primary and secondary education. In Germany, the basis of all education is definitely linguistic; in America, there is a strong tendency to give increased prominence to manual and practical exercises in humane education. German secondary education is still haunted by the ghost of "general culture," i.e., by the idea that there is a circle of varied knowledge which a youth ought to possess at the end of his secondary school-life, and the possession of which marks off in social intercourse the "educated man" from the "uneducated." America has long discarded any such idea, and lays stress not on any formula of "general culture," but on alertness and adaptability of mind. Hence in Germany the ideal of a many-sided course of liberal education stubbornly holds its ground; in America the field is thrown open, and bold



experiments in "elective studies" have met the national taste. In Germany, educational advance comes after a long period of philosophic meditation and paper warfare; in America, one practical experiment follows another in startling succession, and the student can hardly keep up with the variety of new educational undertakings. The work of the German schools is quiet, methodical, and laboriously persistent; that of the American is restless, often hurried and effervescent. The clever German boy lives in an atmosphere of great respect for professors, and for learning as learning; the American boy has his thoughts turned from an early age to business and the needs of practical life. The German boy knows that if he stops in Germany he will have to wait a long time before he can hope for professional eminence; the American boy feels an almost boundless horizon before him and every fibre in him is tense with a determination to make his way to the front.

Of course, all these sharp contrasts need qualification. There are exceptions both ways. But, speaking broadly, the two systems of education are distinguished from one another by the marked differences of outlook, temper, and tradition, which are summarised above. Yet, as always happens, the two systems, because they are so different, have had a kind of fascination for one another. America has drawn immense numbers of her citizens from Germany, and it has often been remarked that the children of immigrants of German nationality are strongly American in sympathies and character. Germany, on the other hand, has had a deep influence on American education. Thousands of the most cultivated Americans have been students at German Universities. "Germany," said the United States Ambassador in Berlin on Thanksgiving Day in 1900, "Germany, from the intellectual point of view, has more and more become the second mother of the United States. More than any other country, Germany has made the Universities and Technical High Schools of America what they now are—a powerful force in the development of American civilisation."\* German influence has, in some respects, been dominant in the research work of the American Universities, and German influence is very noticeable in American theories about the methods of instruction. Froebel is a greater name in America than in Germany. He predicted that his ideas would be more fully carried out in America than elsewhere, and the prophecy seems to have been fulfilled.† In American discussions on educational matters, the name of Herbart has been more prominent than that of Dr. Arnold, and German tendencies have so far been stronger than what may be called "the movement back to Locke." There are signs of a change in the course of the current, but, during the last thirty years, the German writers on education have chiefly coloured American thought on educational subjects, though, perhaps, their real influence on American practice has been less than might appear at first sight.

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\* *Times*, December 1, 1900.

† Mr. Joseph Lee in *Educational Review* (U.S.A.), 1900, pp. 128-9,



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1. The first step in the process of the scientific method is to ask a question. This question should be based on observation and should be specific and measurable. For example, "Does the amount of sunlight affect the growth of a plant?"

2. The second step is to form a hypothesis. A hypothesis is a statement that can be tested. It should be based on the question and should be a prediction of the outcome. For example, "If a plant receives more sunlight, then it will grow taller." This hypothesis is testable because it can be measured and compared.

3. The third step is to design an experiment. The experiment should be designed to test the hypothesis. It should include a control group and an experimental group. The control group is the group that does not receive the treatment being tested. The experimental group is the group that receives the treatment. In this case, the control group would be plants that receive a normal amount of sunlight, and the experimental group would be plants that receive more sunlight.

4. The fourth step is to collect data. Data is the information that is gathered during the experiment. It should be recorded in a table or graph. In this case, the data would be the height of the plants in the control group and the experimental group.

5. The fifth step is to analyze the data. This step involves looking at the data and seeing if it supports the hypothesis. In this case, the data would be analyzed to see if the plants in the experimental group grew taller than the plants in the control group.

6. The sixth step is to draw a conclusion. A conclusion is a statement that summarizes the results of the experiment. It should be based on the data and should answer the original question. In this case, the conclusion would be that the amount of sunlight does affect the growth of a plant.

7. The seventh step is to communicate the results. This step involves sharing the results of the experiment with others. It can be done through a presentation, a paper, or a report. In this case, the results would be communicated to the class or the teacher.

8. The eighth step is to repeat the experiment. This step is important because it helps to confirm the results. If the experiment is repeated and the results are the same, then the hypothesis is more likely to be correct. In this case, the experiment would be repeated to see if the results are consistent.

9. The ninth step is to apply the results. This step involves using the results of the experiment to solve a problem or answer a question. In this case, the results could be used to help a gardener decide how much sunlight to give their plants.

10. The tenth step is to evaluate the experiment. This step involves looking at the experiment and seeing if it was done correctly. It should include a reflection on the process and the results. In this case, the student would evaluate the experiment to see if they followed the steps correctly and if the results were what they expected.

read papers on art and literature; and at seventeen we had a regular debating club. And all the time, at every stage, there were private theatricals, and excursions into the country, and dancing lessons, and horseback riding, and co-education with the education left out, for the poor overburdened girls helped us to bear the load by suffering in common."

He describes his out-of-school enthusiasms as they succeeded one another. First, his herbarium; next, electrical machines; next, Arabic and the Koran, with a strong desire for missionary effort; after that (fired by local excavations) the prehistoric anthropology of West Prussia. But all the time he had to go straight on through the regular course of the classical school, which made "no concession to individual likings and preferences," but steadily confined itself to building up in the boy's mind a firm foundation of accurate, general knowledge.

"I have spoken of these boyish passions not only to show that we had an abundance of free time and the best opportunities for the growth of individual likings, but for the purpose of emphasising—and I add this with all the gratitude of my heart to my parents, my teachers, and the community—that the school never took the smallest account of those inclinations, and never allowed me to take the slightest step aside from the prescribed school work. My school work was not adjusted to botany at nine years because I played with an herbarium, and at twelve to physics because I indulged in noises with home-made electric bells, and at fifteen to Arabic—an elective which I miss still in several high schools, even in Brookline and Roxbury. The more my friends and I wandered afield with our little superficial interests and talents and passions, the more was the straightforward earnestness of the school our blessing; and all that beautified and enriched our youth, and gave to it freshness and liveliness, would have turned out to be our ruin, if our elders had taken it seriously, and had formed a life's programme out of petty caprices and boyish inclinations. I still remember how my father spoke to me, when I was a boy of twelve. I was insisting that Latin was of no use to me, as I should become a poet or a physicist. He answered: 'If a lively boy has to follow a country road, it is a natural and good thing for him to stroll a hundred times from the way, and pick flowers and run for butterflies over the field; on both sides of the road. But if we say to him, "There is no road for you; follow your butterflies," where will he find himself at nightfall?'"

What then, he asks, was the cause which made the German course of secondary education so much more effective in his case than he thinks the corresponding American course is in the case of similar boys in New England? He admits many causes—the good school books, the skilful construction of the school curricula, and the general organisation of the system—but two causes seem to him to have been prominently important—first, the high scholarship of the masters, and secondly the fact that the parents of the boys "reinforced the boys' own belief in their work and their respect for their teachers. A reprimand in school was a shadow on our home life; a word of praise in the school was a ray of sunshine for the household." But this respect at home was a just tribute to the devotion and learning of the school masters. The high culture of the teachers was "the real secret of the German school."

"My teachers were enthusiastic on the subjects they taught, as only those who know them thoroughly ever can be. I had no teacher who hastily learned one day what he must teach me the next; who was satisfied with second-hand knowledge, which is quite pretty for entertain-

ment and orientation, but which is so intolerable and inane when we come to distribute it and to give it to others. I had from my ninth year no teacher in any subject who had not completed three years' work in the graduate school. Even the first elements of Greek and mathematics, of history and geography, were given to us by men who had reached the level of the doctorate, and who had the perspective of their own fields. They had seen their work with the eye of a scholar, and thus even the most elementary material of their science was raised to the height of scholarly interest. Elements taken for themselves alone are trivial and empty everywhere, and to teach them is an intolerable drudgery, which fills the school-room with dullness and the pupils with aversion. Elements as the introductory part of a scholarly system are of ever new and fascinating interest, more promising and enjoyable than any complex problems. A great poet once said that any man who has ever really loved in his youth can never become quite unhappy in life. A man who has ever really taken a scholarly view of his science can never find in that science anything which is quite uninteresting. Such enthusiasm is contagious. We boys felt that our teachers believed with the fullness of their hearts in the inner value of the subjects, and every new bit of knowledge was thus for us a new revelation. We did not ask whether it would bake bread for us. We were eager for it on account of its own inner richness and value, and this happy living in an atmosphere of such ideal belief in the inner worth and glory of literature and history, of science and thought, was our liberal education."

What is the moral of all this, according to Professor Münsterberg? Premature specialisation is a blunder — a blunder even from a money-making point of view, and an infinitely greater blunder from the point of view of the intellectual life. Division of labour threatens to cripple personality; therefore, defend and enrich the personality by securing for it a liberal education. Moreover, "the higher the profession, the more nearly is the whole man working in every act and the more therefore is a broad general education necessary to practical efficiency," and the only firm basis for effective specialisation. The school must fit the scholar for life as well as for livelihood, but both preparations involve an ideal element. The school must be intellectually strict, serious, severe; it must be kept remote from the whirl and hustle of life; but it must not be, on the other hand, a place for playing at work and working at play. Above all, it must not be mercenary, vulgar, selfish. Is it urged that schools should teach what the boys will want afterwards? Who can say when a boy is twelve years old what he will specially need in the work of life? On this point, Professor Münsterberg's comment is singularly interesting.

"It is easily said in a school programme that the course will be adapted to the needs of the particular pupil with respect to his later life, but it would be harder to say how we are to find out what the boy does need, and even if we know it, the straight line to the goal is not always the shortest way. The one need of my individual fate, compared with that of other German boys, is the English language, and the one great blank in the prescribed programme of our gymnasium was the total absence of instruction in English. Yet I have such unshaken confidence in the wisdom of my teachers that I cannot help thinking they knew quite well how my case stood. When I was twelve years old, I can imagine, the principal of the school said in a faculty meeting: 'This boy will need the English language later, to philosophise on the other side of the ocean, and he ought to begin now to learn it, in time for his professional work, to get the free

time for it we must eliminate the Greek from his course.' But then my dear little grey-haired Greek teacher arose, and said with indignation: 'No, sir; the bit of English which is necessary to lecture to students, and to address teachers' meetings, and to write for *The Atlantic Monthly* can be learned at any time, but Greek he will never learn if he does not learn it now; and if he does not have it, he will never get that inspiration which may make his scholarly work worth calling him over the ocean. Only if he studies Greek will they call him to use English: but if he learns only English, he will never have the chance to use it.' That settled my case, and so came about the curious chance that I accepted the professorship at Harvard without having spoken a single word of English in my life; and I still thank my old Greek teacher, who is long since dead, for his decision."

The essential task of the higher schools, Professor Münsterberg argues, is to stand firmly by the highest possible tradition of disinterested culture. When he looks round on what he regards as the haphazard choice of studies in American Colleges, and on the whole system of "elective courses" as a substitute for one central course steadily pursued, he declares himself against the tendency in American education "to follow the paths of least resistance" as perilous to much that is best in school work. "He who is allowed always to follow the paths of least resistance never develops the power to overcome resistance: he remains utterly unprepared for life."

Me this unchartered freedom tires;  
I feel the weight of chance desires:  
My hopes no more must change their name,  
I long for a repose that ever is the same.

It is the business of the school not to play to the gallery but to stand out against the vulgarity of the popular demands. Schools should knit themselves together in defence of the high and hard ideals, "not to outbid one another in catering to the tastes of the public."

Therefore, he concludes, "the true reform of our schools is dependent on the better instruction of our teachers."

"That was the secret in our German schools; the most elementary teaching was given by men who were experts in their field, who had the perspective of it, and whose scholarly interest filled them with an enthusiasm that inspired the class. To bring that condition about must be the aim of every friend of American school life. That is the one great reform which is needed, and till this burning need is removed it is useless to put forward unimportant changes. . . . Just as it has been said that war needs three things, money, money, and again money, so it can be said with much greater truth that education needs, not forces and buildings, not pedagogy and demonstrations, but only men, men, and again men—without forbidding that some, not too many of them, shall be women.

"The right kind of men is what the schools need; they have the wrong kind. They need teachers whose interest in the subject would banish all drudgery, and they have teachers whose pitiable unpreparedness makes the class work either so superficial that the pupils do not learn anything, or, if it is taken seriously, so dry and empty that it is a vexation for children and teachers alike."

There is very much in Professor Münsterberg's article which applies to English education as well as to American, and on one point, at any rate, every reader will agree with him, namely in the emphasis which he lays on the necessity for a very high standard of knowledge and for great devotion to knowledge

among the teachers. But even were Dr. Münsterberg's reminiscences to be taken as typical of German conditions, instead of a very vivid and winning presentment of the early recollections of a man of genius, they do not really help us to a final solution of the difficulty which presses on secondary education in all countries at the present time. The professor seems to speak as if the gymnasium were the only type of higher school in Germany. But this, of course, is not so. The very same causes which have made elective studies so marked a feature of American schools have shattered the intellectual monopoly of the German gymnasium. The German parent himself has now to "elect" the studies which his boy shall follow; whether he shall go through the fully classical gymnasium, or through the Greekless Realgymnasium, or through the non-classical Oberrealschule. And on the choice, generally made when the boy is only nine years old, has hitherto depended the choice of the boy's profession in later life. The German boy may not specialise in his work at school, but, as a rule, his choice of a future career has to be specialised far earlier than is the case with boys in England or America. And hence all the movement in favour of the reform schools, on the plan which has been (so far successfully) adopted at Frankfort-on-the-Main. The old days of classical monopoly in German secondary education have gone past recall. There too, as in America, the uneasy stress of modern life has broken up the old and simple uniformity of the educational course. In one form or other, "elective studies" are everywhere, in Germany as well as in England and America. And why is this? Because the old state of things, for which the classical gymnasium was the appropriate discipline, has gone for ever. Professor Münsterberg is really looking back on a vision of the past which bears little relation to the urgent needs of the present. The tasks of modern life are so complex that they demand a no less complex system of preparation. The problem is to discover the best course of preparation and to combine in the most fitting proportions the liberal element and the more technical element of preparation for the future calling. We cannot evade the question by turning our backs on it and by seeking refuge in some old course of study which has no longer a definite relation to the needs of later life. Formerly the gymnasium was well-adjusted to the requirements of all the higher professions. It can no longer claim to be well-adjusted to all of those requirements. The needs are far more various than they were, and also the needs have changed. Those happy relations between home and school, of which he gives such a pleasing account, presupposed the complete and natural adjustment of school to life. Every system of education, when it is really working well, rests on an assured basis of social organisation. But that is exactly what is wanting in the new and rapid development of commercial communities. Who can confidently forecast the social or economic organisation of Germany, Great Britain, or America fifty or a hundred years hence?



For boys with strong scholarly interests and with a definite bent towards higher studies, the classical gymnasium must have been in old days an almost ideal kind of secondary day-school. But modern administration and industry and commerce have asserted their new claims, and the secondary schools have had to become variegated in consequence. Nor can anyone predict where the movement in favour of more variety in German secondary education will stop.

Professor Münsterberg's article was received in America with the admiration due to its intellectual force and singular beauty of form and tone. But the underlying assumptions of it have been sharply challenged, and I proceed to quote from two of these criticisms in order to show the contrast between the German and American ideals of education.

Writing in the *Educational Review*\* for June, 1900, Mr. Wilbur S. Jackman, Dean of the Chicago Institute, heartily acknowledges the truth of the criticism that "the teachers in all grades of our schools should know more." But, "if one will take a look at the proper statistics covering the past twenty years, and compare the qualifications required of teachers in all grades of schools two decades ago with those of the present day, there will be found some reason to hope. Again, if one will take the course of study as outlined for the best grammar schools, high schools, colleges, and universities ten years ago, and compare them with the courses outlined in the same institution to-day, he will be impressed still further with what the real increased efficiency of the teachers actually means for the school. Of course, the movement is slow, but it comes in the right way and from the right source—as an evolution and from the people."

But it is on the underlying principles of national organisation that Mr. Jackman most profoundly dissents from what he takes to be Professor Münsterberg's assumptions.

"It has been demonstrated once more how exceedingly difficult it is for a product of an educational system derived from the monarchical ideal of society to understand the ideals of education proposed by a democracy. There seems to be no perception of the more than oceanic abyss that separates an educational system in which the teacher leaves questions relating to instruction to the 'principal and the government' from a system in which the teacher is an organic part of the government itself. This is not the place to argue as to the relative merits of the two systems growing out of such different ideals; it is sufficient to emphasise the point that through the ages the old world has tried the former, and at this time the new world proposes to try the latter. In this country it has been resolved to preserve for each person to the uttermost the privilege of the initiative, on the theory that society not only has the right but also the actual need of the best that each individual brings into the world with him when he is born. . . .

"Another point that always seems to fall outside the comprehension of a genuine product of the old world school system is the fundamental proposition of democracy that by granting equal opportunities in and



through education to all the children of all the people, society shall be able to organise itself into a self-controlled, coherent, self-perpetuating body ; and also the unavoidable corollary, that on the basis of the ability and disposition to make righteous use of such opportunities, all places in the democracy shall be open to all the children of all the people. This proposition rests upon the theory that only out of such natural adjustments of people, made under increasing enlightenment, can mankind ever hope to enjoy a stable and well balanced, though not fixed, but sensitive and self-compensating social condition. It is scarcely necessary to remark that this is precisely the reverse of the dominant theory that underlies the monarchical system of education. . . . Considering the difficulties that beset the development of a system of education consistent with democratic ideals, it should be always remembered that no small part of the trouble lies in dealing with those who have received their training under monarchical ideals. These people belong to two classes ; one seeking to transplant in this country the essentials of the old régime, and the other fighting this attempt to the death as the embodiment of all the evils from which they have fled. In spite of its inconvenience, not to say danger, one must have a good deal of sympathy with the latter class, who show so much restiveness and irritability at the mere suggestion of any authority being exercised over them in the matter. The old monarchies have utterly failed by education or other means to inspire these people with trust in their fellow-men. We Americans, therefore, must simply wait until they have had time to take their bearings from the outlook afforded by the new-world ideals. The great majority of these people mean well, but they are possessed with a deadly fear that has been begotten by tyranny and nurtured in ignorance in their native lands. We must be patient."

The bottom difference at issue is a difference in the estimate of human nature. Do we believe that we all need severe and searching discipline as well as encouragement and interest, or are we inclined to lay all the stress on awakening interest, and allow the discipline to look after itself, in the certain confidence that (to quote Colonel Parker's words), "the right environment of the child brings the good in him into full activity, and allows the bad to die of disuse," and that "through a proper development of selfhood the tendency to selfishness may be banished"?† Mr. Jackman protests against Professor Münsterberg's view that studies are good which meet with "inner resistance" on the part of the pupils. It is the old difference between Rousseau and his opponents. Mr. Jackman is sanguine about the tendency of human nature. Professor Münsterberg would be inclined to side with Frederick the Great, who, when Sulzer assured him that education had made great progress since people had begun to act on the principle that man was good by nature and not evil, replied, "My dear Sulzer, you don't know what an accursed race this is to which we belong." As a protest against the deadness and dulness of much of the older kind of education, a strong and active party have pressed, sometimes to an extreme, the importance of making schoolwork "interesting." On this point Professor Münsterberg writes:—

"All instruction which is good must be interesting ; but does it follow therefrom that all instruction which is interesting must also be good ? Is it not possible that there are kinds of interest which are utterly bad and destructive ? All that appeals to the natural tastes and instincts is

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\* *Educational Review*, June, 1900.

† *Course of Study*, Chicago Institute, July, 1900, p. 10.

interesting ; does it follow that nothing is interesting which goes beyond the natural instincts ? Is it not savage life to follow merely the instincts and natural desires ? Is not all the meaning of education just to discriminate between good and bad desires ; to suppress the lower instincts and to reinforce the higher ; above all, to awake new desires, to build up new interests, to create new instincts ? If civilisation, with its instruments of home and school education, could not overcome our natural tastes and instinctive desires, we should remain for ever children whose attention is captured by everything that excites and shines. The street tune would expel the symphony, the prize-fight would overcome the drama, the yellow press and the dime novel would be our literature ; our social life would be vulgar, our public life hysterical, and our intellectual life a mixture of cheap gossip and sensational news with practical schemes for comfort and advertisement."\*

The other side would doubtless agree, in general terms, that it is the business of education to discriminate between good or bad desires, but, while Professor Münsterberg would probably fall back on authority and tradition as furnishing part, though only part, of the criterion between different kinds of educational interest, his opponents are far more sanguine in their belief that, granted the right environment, a child will naturally, if you place it in a community, incline to the right interest and instinctively reject the base. "Every child," writes Colonel Parker, whose influence in American education has been deservedly great, "every child, through the use of his knowledge or skill in the help of others, may feel at once and always the highest purpose of life and living. . . . The ideal school is an ideal community. An ideal community is a democracy in the purest sense of that pregnant word. Character, constantly realising itself in citizenship, in community life, in complete living, is the immediate, everlasting, and only purpose of the school."† This conception of the school as being best organised in the form of a democratic community is very far from the traditional German view. Perhaps experience will show that, for the average run of human beings, the truth lies between the two extremes, or, rather, that the right thing is to combine, in one institution, the two opposite tendencies of authority from above and self-government from within. This, in effect, was Dr. Arnold's view of the right organisation of an English public school.

In the course of an able and temperately-written reply to Professor Münsterberg's article, published in the *Educational Review* for September, 1900, Mr. Joseph Lee, of Boston, Mass., writes as follows :—

"That there is a foundation of truth for Professor Münsterberg's criticisms no one, I think, can deny. That our teachers are not sufficiently prepared for their work is a criticism not entirely new, but nevertheless one which cannot be too often repeated until repetition becomes unnecessary. The elective system, too, as practised in our schools and colleges, is as yet crude and imperfect, and many just criticisms might be brought against it. . . . The many faults to be found in our schools are due partly to the fact that the new ideas, so far as they have been adopted, are as yet very new and are imperfectly worked out, but chiefly

\* *Atlantic Monthly*, May, 1900.

† *Chicago Institute Course of Study*, June, 1900.

to the survival of ideas inherited from a time and a condition long past, having no true or vital connection with our American life of to-day, and giving rise to the failure of sympathy, which Professor Münsterberg has pointed out, between the American school and the American home.

"If I may be permitted a brief autobiographical statement in answer to Professor Münsterberg, I, too, could have entered Harvard College at the age of fifteen, and I owe this early proficiency in book-learning, not as Professor Münsterberg did, to highly trained specialists, but to an old woman who had never been to college, but who knew how to teach arithmetic, and to a young man who, like Shakspeare, knew little Latin and less Greek, and who had picked up a smattering of French during a walking tour whose acquirements, therefore, cannot have exceeded those of the average German boy of fourteen—but who possessed the gift of imparting something more than he knew of these languages to an extent which I have never seen approached by the more profound scholars under whom I have studied since that time."

Mr. Iain proceeds, in a later part of his article, to make a very interesting contrast between German and American ideals of life, and to argue that the schools in the two countries will have to be somewhat differently organised in order to meet these differences in underlying aim.

"The more important of the two causes which Professor Münsterberg assigns for the success, in their own line, of the Prussian schools I believe to be, not the knowledge on the part of the teachers of the subject taught, but the co-operation between the school and the home. And most important of all, I think, is the central and original cause of both the other causes, namely, the German character and view of life and the closeness with which the German school is adapted to that view. The German idea of the aim of life is knowledge. The professor is to the German what the great business man is to us, the type, namely, of the successful man. From this national devotion to knowledge arise both the high accomplishment in the way of learning on the part of the teachers, the reverence with which such accomplishment is regarded in the German home, and the readiness of the German boy to be impressed with the importance of striving for similar attainment. To the German boy it doubtless seems a natural sequence of cause and effect that his failure in spelling or in Latin grammar, should, as Professor Münsterberg describes, cast a gloom over the home circle; he takes to learning as the young duckling takes to water, or as the American boy takes to baseball; in providing him with the means of learning and with learned instructors the German school is providing him with the means of development which his nature calls for.

"But it does not follow that because the German schools have been so successful in taking a real place in German life our American schools could be equally successful by adopting the same means or that, as Professor Münsterberg suggests, the American home can be made into a 'good home' by an attempt to bring it into the German attitude of adoration toward the German school system or any system nearly resembling it. America is not Germany; we are not Germans; and if we try to imitate the German methods in the hope of producing German results we shall inevitably be disappointed. To us knowledge is not the great end and aim of life, and, if we may judge from the history of our race, it never will be. It is useless for us to try to live up to the German standard in this direction, because it is not our standard, and we have not got it in us to attain to it. Our ideal is an ideal not of learning, but of living, not of acquirement, but of action. We would rather, and are more easily, made dishonest than without honesty live the making and controlling of the good and beautiful things of this world for our own use and other purposes more attractive than the acquirement of any amount of knowledge of how these things may be made. It is not our duty to have been dishonest. It is money-making—the making of money which modern life supplies. Learning brought in a few years ago was a thing of the past, and the modern school is a thing of the past."

We see in it life,—the joy of contest, the opportunity for brave and noble work, the means of establishing and beautifying the home, of building up the school or library of our native town, of impressing upon outer objects our inner thoughts and aspirations, of living out our ideal as sons, fathers, brothers, citizens. . . . To us, life—life with blood in it, full of action, contest, achievement, crowned with power and capable of beneficence, is the main thing. You cannot make of us a race of students, and you cannot give us ‘good homes’ by trying to make the American home like the German home—an adjunct of the school and subordinate to the older school idea of learning as the chief aim of life. The problem here is not to bring the home to the school, but to bring the school to the home, or, rather, to make both the school and the home co-operate in ministering to life.”\*

America has rendered a great service to Europe by refusing to put up with a purely linguistic course as the only type of “secondary education.” We need more and more varieties of “secondary education,” and it is essential that the supply of “secondary education” should be adjusted to the real, and not to the imaginary, needs of a district. It is sometimes assumed that in any given area there will be a certain percentage of children needing what is called “secondary education.” But the assumption is fallacious. In the first place, “secondary education” is as wide a term as “groceries.” In the second place, the number of children needing secondary education in a given district depends on the economic and social conditions and possibilities of the country as a whole, as well as of the particular area in question, but still more on the aptitudes and energy of the children themselves.

Among the qualities which are most precious are resourcefulness, initiative, constructive ability, artistic power, leadership trustworthiness, gaiety of mind, moral courage, reverence faith. Yet these qualities are but little tested or developed by the ordinary kind of school studies. Let us beware, therefore, of riveting down on the nation a system of intellectual tests which will take no account of the very qualities on which in the long run national welfare most depends. Chaos may be a bad thing, but over-organisation is worse.

#### IV.

Both Germany and America are alive to the national importance of having courses of University education, and of higher technical and professional training, skilfully planned with a view to meeting the complex needs of modern life. They realise that the intellectual efficiency and the intellectual standards of the other grades of education (viz., secondary, lower-technical, and primary schools) depend in large measure on there being excellent provision of the highest types of University teaching, and of means for well-equipped and co-ordinated research. National

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\* *Educational Review*, Sept., 1900.

education is not made up of layers of water-tight compartments. There should be a circulation of intellectual interest through all its parts. To neglect and starve the universities and the higher technical and professional education is a certain way of impoverishing the vitality of the whole educational system. It is difficult to believe that in the progressive parts of the United States an institution of the rank of the Bodleian Library would be allowed to suffer from straitened means, or that such an appeal as was put forward on behalf of the University of Cambridge would fail to meet with an instant response. It is true that the highest types of education are fitted only for the few. But those are the indispensable few on whom so much depends. It is true that the higher forms of technical and professional training are immensely expensive. No one who has not been concerned in the organisation of such teaching can realise the extraordinary pressure of new and costly needs which besets every modern university and technical high school. But the demands are inevitable. They are the necessary outcome of the rapid development of physical science, of the application of scientific methods to *all* studies, and of the almost infinite variety and complexity of the life for which the students have now to be prepared.

One of the most striking things in American life is the profuse yet well-considered liberality with which wealthy citizens endow places of higher education. Cobden noticed it. But since his time private benefactions to educational institutions have greatly increased. There is nothing like this in Germany. America is under heavy obligation to the far-sighted munificence of those who have created these new facilities for higher education. The popular imagination has been struck by the magnitude of the gifts. The American people realise that Universities are now an essential part of healthy and efficient national life. Some of these princely gifts may have been due to a form of ambition. But this ambition is of a noble kind. Some may have been due to a sort of fashion. But it is highly creditable to American life that fashion should have taken such a form. Most of the gifts are probably due to a conviction of the urgent need for higher education in a democratic community. Some of the gifts imply that the great American men of business recognise in some of the Presidents of the American Universities men of the same type as themselves—men of constructive imagination, of organising genius, of unfailing resource, of commanding power. But this munificence in endowing great centres of academic learning is doubtless due in part to a deeper instinct still; namely, to a belief that great endowments, devoted to University teaching and research, may hereafter guarantee, to certain types of learning and to some branches of science, a shelter of which they may stand in need. All over the Middle and Western States, the dominant type of University is that maintained out of public funds by the State. Great efforts have been made to strengthen the State Universities, and their development is a proof of the strength of the current of educational enthusiasm in the United States. But



circumstances might conceivably arise in which Universities under direct State control, or indebted for the chief part of their income to State policy and favour, would not prove the best centres for the study of certain pressing problems of economic or political science.

A national system of higher education is stronger if it rests partly on endowment, partly on public aid. The first gives independence against momentary clamour; the second provides the best security against torpor and decay. But it is as dangerous to make the whole of higher education dependent on the vote of political bodies as it would be to leave it wholly removed from public control. A system of higher education is least likely to pass from one extreme to another if, like a compensating pendulum made of different metals, its constituent parts are so varied as each to check the characteristic weakness of the rest.

In the history of academic institutions in America, the student can discern three successive stages of dominant influence. In the earliest stage the ideal was of the older English type. French influence followed, and then German. England gave America the collegiate ideal. France gave her the ideal of academic organisation in direct connection with the State. Germany gave her the ideal of academic research. In America, as in England, the word "college" means many kinds of educational institution, some worthy of honour, some unworthy. The old American College is one of the most characteristic features of American education. It has no counterpart in Germany. It is the direct descendant of an English type. Much that is best in American character has been strengthened by the work of the good Colleges, large and small. But the small College is hard pressed. It lacks funds. It cannot meet the new needs for scientific equipment. The public High School draws away some of the students who used to enter College early—say at seventeen—and complete their College course by twenty-one. Professional preparation is now a more elaborate and costly thing than it used to be. The small Colleges cannot provide the necessary opportunities for such preparation. And many of the new Universities stand for an academic ideal which is in direct conflict with that implied in the old College tradition. Yet there are signs that many thoughtful Americans feel that the United States cannot afford to lose the character-forming influences of the old Colleges. What will befall the smaller Colleges time alone can show. President Harper, of the University of Chicago, has recently said that the two most serious problems to be solved in American education during the next quarter of a century are the problem of the small College and the problem of the Rural School.\*

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\* In *The Prospects of the Small College* (Chicago University Press, 1900). In this little book Dr. Harper has compressed the materials of a treatise within the compass of a small pamphlet. The reader will find, in the *Monographs on Education in the United States*, edited by Professor Murray Butler, a deeply interesting chapter on "The American College," by Professor West, of Princeton.



It would be difficult to exaggerate the influence exerted by German academic ideals on American Universities during the last thirty years of the nineteenth century. By now there are signs, not of reaction, but of recollection of an older conception of academic usefulness. The German professor is devoted to his *Fach*; the English-speaking professor is generally uneasy in his mind unless he is devoted to the personal needs of his pupils. The German Universities aim at increasing knowledge; the English-speaking Universities seek primarily to develop character. The chief mark of the German Universities is research. They fail in pastoral care. For a time the younger generation of American professors seemed fascinated by the German ideal. But now there are many signs of a deepening conviction that the Universities have a greater work to do in making citizens than in making specialists. The American University ideal of to-day may be broadly stated as an attempt to combine the German and the older English ideal. How far one institution can at one and the same time live up to both ideals, experience alone can show. But there is a growing sense that the best results of University life will be found in character rather than in specialised attainment.\*

- With this there is connected a reaction against the extremer forms of the "elective" system in University studies. Many leading University men are feeling their way towards something more like a core of common studies, from which elective studies may radiate this way and that. President Eliot, of Harvard University, did a great and historic work in securing more freedom of choice in academic studies. But this side of his work was emancipatory rather than constructive. The task of the immediate future is to construct a new synthesis of studies, out of the diverse elements to which some academic curricula have been reduced.†

## V.

There are other points of contrast between the educational problem in Germany and that in America. Germany has religious instruction in all her State primary and secondary schools—the teaching being Lutheran or Roman Catholic, according to the circumstances of the district. America, on the other hand, relying on there being a religious atmosphere in her schools in spite of the absence of direct religious instruction, has adopted the system of secular education. But there are many signs that the question of religious instruction in schools is far from being finally settled in America. In the *Educational Review* for June, 1901, the Editorial Notes call attention to "the increasing activity in the United States of those earnest persons

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\* This view is admirably stated in many of the addresses of Dr. Hadley, President of Yale.

† See Appendix II.

who believe in State aid for schools maintained by religious bodies and in their interest." But, writes the Editor, public education in the United States can never be made otherwise than secular.

"The problem . . . may be stated thus: Shall the State aid with its funds schools other than the present public schools—schools, that is, maintained primarily for the purpose of including a specific type of religious teaching in the curriculum? A single line giving power to the Board of Education to appropriate public money to private schools, recently found its way, though plainly unconstitutional, into the revised charter of New York City, and such a storm of protest was raised that it was taken out again in a hurry. There is little reason to doubt that a similar proposal in any other State would have a similar reception. But—and this is the point which is so often overlooked—the question of religious instruction in education remains unsolved.

"Nor is the situation helped by reducing religion to a type of ethics, as some propose. Religion is not only faith, but dogma; not only conduct but worship; and to identify it with ethics is not to simplify the matter any, but rather to complicate it by adding a new variety of religion which must be provided for.

"From our point of view only two lines of action are at all possible: (1) to take the view held by many Roman Catholics and Lutherans that the school itself must be religious, not secular, and that religious schools should be State-aided; and (2) to take the view that education transcends the school, and so, while the school may remain secular, its work must be supplemented, if education is to be complete, by religious instruction to be given by other educational agencies, notably the family and the Church. The alternative is to destroy the completeness of education by omitting religion altogether.

Of the two possible lines of action named the latter is, in our view, the preferable one. It recognises the function and also the limitations of the school, and provides for the active interest and co-operation of two other supremely important educational factors, the family and the Church. Education is, of course, a unitary process, but it is no less unitary because several agencies co-operate in it. The former view runs counter to some of the deepest-seated convictions of the American people, and also mistakes it seems to us, the proper educational function of the school. It is for these reasons that we do not believe that this view can prevail, or that it ought to prevail. It must be said, however, that it gains sympathy in some quarters from the fact that Protestant churches are, as a rule, shockingly lacking in any appreciation of their educational responsibility and also, apparently, in any capacity to rise to it."

It is believed by many of the most thoughtful and far-seeing students of education in America that the private confessional school (generally Roman Catholic, but sometimes Lutheran) will never menace the supremacy of the public secular school. Nevertheless it is admitted that in so far as the maintenance of a purely secular system in the public schools results in a percentage (even if only 5 per cent.) of the children being sent to uninspected, unaided, and therefore, as a rule, comparatively inefficient schools, it works badly in the interest of the community at large.\* But (they argue with great force) the percentage is so small that we can afford to neglect the leakage. However it is possible that means may be found, in the cities

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\* This drawback to a purely secular system of State education is strongly felt by some who have studied the school question in parts of Australia.

at any rate, to bring this irreducible minimum within the influences of municipal administration and public aid by permitting one or more schools in the city to be virtually Roman Catholic, taught by Catholic teachers and Catholic in atmosphere, although technically city schools. There is an analogy in the action of the London School Board with regard to the Jews' elementary schools.

Germany is unencumbered with one question, which is, perhaps, the most serious of all social problems in America—the education of the coloured people. There seems strong reason for the belief that a course of education which is predominantly literary and linguistic is by no means the best suited to the needs of the great mass of the coloured population.

The hierarchical form of social organisation which prevails in Germany is very unlike the state of things in America. The democratic idea is interwoven with the whole system of common schools, attended by rich and poor alike. In some parts of America, however, there is a distinct increase in private schools for the wealthier classes, and a marked growth in the popularity of secondary boarding schools, which are established in the country, and are outside the limits of the common-school system. In some of the great cities the feeling that it is an act of civic disloyalty to send children elsewhere than to the common schools seems weaker than heretofore. But it is still very strong in cities of the second rank, and in all smaller places, and is the cause of much that is good in American education. The mixture of classes in the public schools seems to have a distinct educational advantage. The children of wealthy parents learn to respect and to imitate the intense industry and resolution of purpose which distinguish so many of the boys who come, full of ambition, from straitened homes. The children from the latter, on the other hand, learn much from meeting those whose home circumstances are more cultivated and refined. It is said that this commingling of classes does not excite class jealousy or social hostility.

The democratic idea has a further influence on American education. It is resolutely opposed to that conception of discipline which rests on the idea of obedience to the arbitrary will of a superior. There is a great deal of military enthusiasm in the American schools, especially since the war with Spain, and some American observers are concerned at what they fear is a tendency of patriotic enthusiasm to degenerate into a sort of unreasoning flag-worship. But this is only the excess of a strenuous and proper effort to make all the heterogeneous elements of the American population realise their common nationality and common citizenship. And there is a strong desire felt by all American educators to keep before the children a high ideal of obedience and self-control. This point of view is well put by Mr. Joseph Lee, of Boston, Mass.

“From the first the teacher is instructed to make the child feel that obedience is due not to the teacher's arbitrary power, but to a third some-

thing to which teacher as well as child is subject—‘to the end,’ as our Massachusetts Bill of Rights has it, ‘that this may be a government of laws, and not a government of men.’ . . .

“ . . . Ours, it must be remembered, is not a military civilisation. America is not aiming at the production of soldiers, whose one virtue shall be implicit obedience to the will of a military ruler, but citizens—men and women, that is to say, who are not subjects of the sovereign power, but parts of it—not to be kept in order by superior physical force, but true citizens in whom the State, its laws, its ideals, its purposes, dwell and are safe, from whom these indeed emanate, whose will is that the Commonwealth shall receive no harm, and who do not so much obey as support its laws, so that where two or three Americans are gathered together there shall America spring up and live, and her laws and institutions grow and flourish.”\*

The democratic spirit in American education is having yet another effect on the development of the schools. Over a large part of the Continent of Europe there is going forward at the present time a strong movement for the establishment of technical schools and classes for artisans. In other words, a technical cap is being fixed on the top of primary education. The Sunday school movement, originally philanthropic and rather literary in its curriculum, is being supplanted by the technical continuation classes. These technical schools and classes are entirely different from the Technical High Schools, which do work of University rank, are intended for quite a different type of student, and can only be entered on the completion of a full course of study in a higher secondary school. The technical continuation classes are meant for artisans and foremen, not for scientific experts or the future directors of industry. But they are definitely specialised and definitely technological. They are intended to make the workman a better workman, not to prolong his liberal education. They rest on the idea that the workman will earn more, be more useful to the State, and be a better citizen and a happier man if he is made more skilful in his trade by means of specific instruction in it. The following passage, however, shows how some aspects of these foreign “trade schools” jar on American ideas. The remarks are taken from the Preliminary Report of a Committee of the Society for the Promotion of Engineering Education on “American Industrial Education. What shall it be?” submitted at the New York meeting of the association in July 1900.

“These schools are comparatively new to the American people. They have long been in operation abroad, and are most fully developed in Germany. But the foreign pattern is not well suited to American needs. In some European countries a boy’s career can be marked out in advance. If he is to be an artisan, he is expected to remain an artisan. The particular trade which he is expected to learn is fixed for him. It is commonly that of his father before him, or that of the prevailing industry of the locality. He is at best a sort of machine, an automaton, worked for what he is worth to the family or to the community and the State. His own individual development is not in question. Most commonly he is not even consulted in the matter. His future is his fate, and he yields to it as gracefully as he can. He has little opportunity to rise above the station in which he finds himself. His career is closed in at the top. Society is stratified horizontally. He finds such solace and comfort as he

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\* *Educational Review* (New York), Sept., 1900.

can by ministering to his bodily comforts and his domestic joys, and frets not over vain ambitions. In fact, ambition is a word of little meaning to him since it can have for him no satisfactory fruition. In these foreign countries, therefore, the trade school is primarily the means of more efficient and more economic production, and only incidentally is it a means of personal development. Your Committee believe that this result of trade school instruction abroad is very largely due to the character of the people themselves, and should not be charged against the schools. *In America all schooling should lead primarily to the elevation and development of the individual, and only secondarily to a greater material prosperity.*

There are always two conflicting tendencies in education—the one which aims at achieving high quality of skill or attainment in each group of subjects by devoting one type of school to each group, and then segregating that type from the other types; the other which prefers to sacrifice a good deal of highly specialised skill in order not to lose the advantage of keeping the students of very different subjects in touch with one another. We find this conflict going on all over the world. The Monotechnic School stands for one tendency; Cornell University is an illustration of the other. In England we try both, but on the whole incline to the idea that it is better to have many ‘sides’ to one school than to keep the types of curricula separate from one another and in distinct schools. Economic, historical, and social considerations have to be taken into account as well as purely educational ones. Our University Colleges, and most of our Universities, illustrate the policy of amalgamation; the German Universities and Technical High Schools illustrate the policy of differentiation. America in the main has stood for amalgamation of studies; Germany for the differentiation of types. But now there are many signs of a new tendency in Germany to amalgamate several types of secondary school under one roof, while in America the differentiation of Manual Training High Schools and Commercial High Schools is evidence of a tendency in the other direction. In point of fact, no general rule can be laid down. The aim should be to secure unity in diversity, but without muddle. The argument for amalgamating different types of education in one institution was well put by Prof. Ayres in a speech at the meeting of the American Society for the Promotion of Engineering Education, held in New York in July, 1900.

“He thought that the technical school, separated from others, a school dealing with a specific subject or profession, was a bad thing from an educational point of view, because, although culture studies may be introduced in such a school, with the idea of producing a greater or less approximation to the conventional liberal education, not nearly such good results are attained as when different classes of students are pursuing the work together and coming to realise, by contact with fellow-students who are working in different lines, that good men are studying engineering, good men are studying chemistry, and good men are studying Greek, and that real earnestness of purpose and desire for learning are limited to no special class. It seemed to him, therefore, that, in directing the future trend of education, the fact should not be lost sight of that, while it is desirable, by the best special training, to help the community, the development of the *man* should not be lost to view. The best way to accomplish both objects is to get just as many as possible of the educational forces to



work together, and to enlarge upon the type of institution which we have, rather than to build up new types."

There is a wonderful keenness and "go" in American education. In point of intellectual attainment and scholarly performance, the rank and file of American teachers doubtless fall (as the rank and file of English teachers would fall) below the corresponding orders of German teachers. The German schoolmasters are probably the most highly instructed class of teachers in the world, but they cannot touch the English teachers in knowledge of, and intimacy with, their pupils in all matters lying outside the business of the schoolroom. Nor can they rival many of the American teachers in vigour and enthusiasm. It is the atmosphere of American life which permeates the American schools. If anything, the schools are too keen to respond. There is something in American life which reacts on American education and causes it to make the boys and men more adaptable than they are here. We get into grooves more than the Americans do, and stick there. We are not so keen to improve ourselves, not so keen to learn, not so keen to forge ahead. We rather like staying where we are. We are much more attached to our old ways. We cherish precedent. We do not think so incessantly about our business in life. We think it "bad form" to "talk shop." The American thinks it the most natural thing in the world, and is learning all the time. Americans visiting our English schools are struck by the fact that our children are not made to think as the American children are. This habit of keen thinking permeates American education. "Our best American schools of technology," wrote President Hadley of Yale University last year, "are no longer places for shop work, but places for the training of thinkers—of men who may not know how to do the particular things which will first be wanted of them, but who are in possession of that general knowledge which will enable them to learn more thoroughly the real bearings of any new problem as it arises. They have become less technical and more scientific."\* Probably in no secondary schools in the world is there so large a proportion of scholars who are actually earning their living out of school hours and in holidays in order to keep themselves at school. "The strong spirit can do well upon scanty fare." The self-denial of the poor American high-school pupil is extraordinary. He will endure almost any hardship, but higher education he must have. There is at present very little of such feeling in England, but it will come in due course when we have begun to feel the pinch of really bad times. It is to be hoped that we shall not repent our slackness too late. America is in the hands of young men. Nowhere else is there such a resolute and vigorous body of young men, determined at all costs to make their country the chief commercial and industrial nation in the world. Education has helped them to be practical, but it

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\* "Higher Education and Social Welfare," printed in *The Education of the American Citizen*.



is they who have insisted on having a practical education. The character of a nation makes its schools. A vigorous people uses its schools as a sharp instrument; a sleepy or stupid nation allows its schools to jog along in the old routine. The special correspondent who contributed to the *Times* last year a striking series of letters on American Engineering Progress, concluded his letter on "Educational Influences" with the significant words—

"To me it appears one of the most disquieting factors in the problem before us that the United States have trained a body of young men who are determined to make their country great, and who have been educated to a living practical interest in the things needful to that end."<sup>\*</sup>

The ideal of hundreds of thousands of active young Americans is a successful business life at constant high pressure. We should make a great mistake if we were to conclude that the American always devotes himself to making money for money's sake. He is glad enough to have the money, but his dominant passion is to succeed in the struggle, to come out victorious, to command power, to win in the battle. And the struggle is in terms of industry and commerce. Lord Rosebery referred to this aspect of the case in his speech at Wolverhampton on January 16, 1901.

"A curious feature, if I may say so without impertinence, in American commercial men seems to me to be that, in combination with that great faculty for the acquisition of money, there is a complete contempt for money except as a means for making more, and for power. These millionaires, of whom we hear so much, are very often men of very simple lives, whose simple rule seems to be to make these enormous accumulations in order to acquire more power, and to roll the snowball larger and larger."<sup>†</sup>

Thus, while the Germans derive their greatest force in industry and commerce from the fact that they insist on all their leaders having a first-rate, unspecialised, liberal education before devoting themselves to the details of business life, the Americans derive a most significant part of their wonderful energy in business from the fact that many of their most eminent business men are fascinated by the intellectual interest and excitement of business, as a great soldier may be fascinated by the intellectual interest and excitement of strategy. The methodical perseverance, the scientific precision and the patient forethought of the German, with the unresting activity, the brilliant dash and intellectual ingenuity of the American, constitute a very formidable pair of rivals contending for commercial supremacy. Each of the two makes his schools help him in preparing for the struggle in which he is engaged. We alone among the leading nations of the world seem to regard education as a bore.

America, with her immense economic resources, is bursting with business energy from end to end. Again, to quote the

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\* *Times*, Dec. 29, 1900.

† *Times*, Jan. 17, 1901.

special correspondent of the *Times* on American Engineering Progress:—

“We have thought ourselves secure; we have relaxed vigilance and eased the burden. Our young men are kept back until their best energies have run to waste; and we have a system of labour employment which strives, not without success, to keep labour at an average of the lowest level.

“It is the wise conception of what will work out to his own advantage which so largely distinguishes the American business man. Such a gift does not come without seeking. It means thinking of business with a concentration of mind that, to the average European, is ‘phenomenal.’ To the American business is a science, and he follows it almost with the enthusiasm of a scientific devotee. No risk of personal discomfort is too great; his alertness is never at fault; success does not blunt his devotion. The Briton is educated to a hundred distractions; in America there is practically no leisured class of young men. On leaving school or college they are obliged to take to business of some kind, or do absolutely nothing, unless they enter the professions; but these form a narrower circle than in Europe. The business spirit enters into all conditions of life. There is no keeping it down. It is manifest in the Legislature, the army, the navy, in literature, journalism, art, politics, and, even more remarkable, in the law. In social life the business spirit is always apparent. The American men, still more the American women, never, to use their own expressive phrase, ‘give themselves away.’ Lavish in hospitality, generous and emotional as they are, yet if you want the American you must buy him at full price. . . . The comparison, however, of the best in the United States with the best in Great Britain on my last trip has increased tenfold the opinion I held from previous experience, that in American engineering enterprise we have a rival threatening our industry to an extent that will be most serious, if not disastrous, to the whole trade of the country, unless a change is made in our business methods. . . . These articles have been confined to strictly business aspects of American life. Whether the American is a more complete man, whether he is more or less agreeable, more moral, stronger, better-looking, or more amiable than the people of other nationalities, is a thing with which we have nothing to do here. The perfect business man is not the highest type, although, under modern conditions, he seems likely to become, for a time, the most efficient.”\*

But this touches on a question of fundamental importance which really determines educational aims. Is a breathless business bustle worthy to be the sole occupation of the most active minds of a great nation? To this question there can be only one answer. If concentrated absorption in business as business for the love of business is the only condition on which commercial supremacy, or even commercial prosperity, can be secured or maintained, the struggle is not worth while. There are other Empires to win besides that. It would be madness to sacrifice all the varied interests of life, the pleasures of cultivated leisure, and the gaiety of an unpreoccupied mind, not to speak of much higher and more precious things, to “the Sabbathless pursuit of a man’s fortune.” A national system of education which made money-getting its central aim would deserve all the contumely which history in a more enlightened future would be certain to heap upon it. If English opinion seems at times wholly irresponsible to the earnest appeals which are made to it to commercialise the spirit of our higher education, does it not show

that England has made up its mind that commercial activity is not the be-all and end-all of the existence of a great nation? Suppose, on the contrary, that every nation were to decide that commercial supremacy should be the supreme aim of its national policy and desire, what could be the outcome of such a conviction but keener and keener rivalry, ending in wars on a colossal scale? Already M. Paul Leroy Beaulieu declares that "the Americans are accustomed to regard Europeans, and more particularly those inhabiting the Continent, in about the same light as they do Orientals who vegetate in dreams of the past. . . . What part will divided Europe play in the presence of this young giant? . . . It is necessary to found an economic alliance of the European Continent. . . . I hold this project to be in the highest degree essential for the rescue of Europe, and it should have the co-operation of all good Europeans."\* Yet what but disaster could be the final issue of such colossal trading combinations armed to the teeth and resolved to secure commercial victory at any price?

Many thoughtful Americans feel this as strongly as do many Englishmen. They know that there are huge social problems in America which will tax to the utmost all the devotion and self-sacrifice of great numbers of their best minds. They hope and trust that the young men who are growing up will throw themselves, in ever larger numbers, into the scientific study of social questions, and that their labours may finally remove from America the shame of municipal maladministration. They realise how much a great, scientifically-educated and strenuously patriotic Civil Service is needed both for America herself and also for the government of her new dependencies beyond the seas. They look with pride and confidence on the growth of the American school of historians, critics, economists, and students of philosophy, of education, and of political science. They believe that it will be possible to create in America an art atmosphere like that of France. They point to the extraordinary and unstinted munificence with which the wealthy men of America endow great institutions for learning, for education, and for research. They anticipate that one result of the growth of a leisured class will be a diversion of energy from commerce to culture, from private enterprise to public service. They look forward to the future with confidence in the rising influence of more varied ideals of success in life, and in the meantime insist that everything possible should be done to maintain in every grade of American education a high ethical aim, and to struggle against the materialism which threatens American life. But it is just here that the most anxious struggle will have to be fought. The world never needed "character" so much as now, when the moral aims, which alone can fortify character in the best sense, are confused by the conflict of moral ideals, and are so much in need of re-statement and re-adjustment to the

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\* Quoted from the Christmas number of the *Neues Wiener Tagblatt* in the *Times*, Dec. 26, 1900.

infinite complexity of modern life. The subtle cause of our educational unrest is

“ This strange disease of modern life  
With its sick hurry, its divided aims.”

In America educational thought is beginning to centre in the ethical and social questions which underlie educational organisation and educational success. A great system of schools depends at bottom on the strong moral and intellectual tradition which inspires the personality of the teachers and upholds them in their arduous work. The raising of the level of teachers' qualifications, the securing of the best possible men and women as teachers in the schools, the study of the problems of government, and the best means of making education subserve the highest interests of the community—these are among the questions which are most occupying the minds of the leaders of American education.

The educational question is at bottom a social question and an ethical question. It is not a question of codes and text-books but a question of life-aims, and of the moral principles which are to govern the community and the relations between man and man and nation and nation. President Hadley, of Yale, one of the leaders of University thought in America, recently wrote as follows:—

“ A college course, if properly directed, must also train its students in the obligations of citizenship. This function is more important in America than anywhere else. An American does not fulfil his whole duty if he is only a skilful specialist, or even if he is a good business man and nothing more. He has a broader duty as part of a sovereign people. He must understand the constitution of the country and the spirit of its laws—not in that perfunctory way which is obtained by the acquisition of a few facts, but by a severe training in those principles of ethics and politics which are needed for the preservation of a free commonwealth. All intelligent men should understand the indirect effects of legislation no less than its direct and obvious ones, should be familiar with the political history of their own nation and of other nations besides their own, in order that they may help their fellow-men to look beyond the passions and prejudices of the moment, and to see what is the probable bearing of the issues, as they arise, on the future welfare of the community.

“ Rightly and wisely to accomplish this the college must give its students something more than mere training of the intellect. Much as intelligence is needed in the conduct of business and politics, we have learned that intelligence alone will not accomplish everything. The higher education will do little towards making more efficient citizens, unless it makes, at the same time, broader and better men. It must so inspire those who come under its influence that they shall apply, in the conduct of the larger affairs of the community, those principles of morals which are recognised as obligatory upon us in our relation to our families and our neighbours.”\*

There has been in recent years a curious interchange of influence between Germany and America. Germany is becoming more and more interested in trade and industry, and more and more prepared to approve experimental varieties of secondary

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\* Address on *Higher Education and Social Welfare* printed in *The Education of the American Citizen*.

schools. America is beginning to approve many tendencies towards centralisation and expert absolutism in educational matters on the ground of their administrative necessity and in consequence of the practical breakdown, in many places, of the democratic machinery for government by direct election. In several American cities the superintendent of education wields very great personal power. It will be a singular thing if on American soil there is developed a new form of local government—expert autocracy on a short tenure.

Germany is departing somewhat from her long allegiance to the idea of "general culture." On the other hand, America is feeling more and more the value of a first-rate quality of secondary education.

England stands half-way, as it were, between the American and the German ideals. She seeks to combine freedom and authority; experiment and tradition; modern studies and classical; interest and discipline; supervision from above and a large measure of local variety and self-government. She finds much to admire both in German education and in American. In the former, its extraordinary precision of aim, its high intellectual standards, its wide diffusion and convenience of access: in the latter, its verve, its belief in its own future, its intense vitality, its incessant experimenting, its courage, and its readiness to take stock of itself and to adjust itself to new needs. They, on the other hand, find much to admire in our best educational tradition—in its fairness of mind: in its personal devotion to the welfare of the boys or girls committed to its charge; in its strong ethical tradition; in its conviction that, unless ballasted by a strong moral character, intellectual brilliancy is a mischievous thing; and, not least, in its belief that the highest kind of scholarship is that which translates itself into wise action and unselfishly embodies itself in the corporate life of some great institution.

M. E. SADLER.

1901.

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## APPENDIX I.

Three of the pressing problems in American education are (1) how to secure those ethical influences which inspire what is best in character; (2) how to adjust the studies of secondary schools to the later requirements of the Universities; and (3) how to reconcile the claims of *literæ humaniores* and of physical science. The same problems, though in a somewhat different form, are pressing in English education also. The following documents show some of the tendencies of English educational thought on these difficult questions:—

- (a) A letter on "Religious Instruction in our Schools," issued in 1901 by the Executive of the Guild of Teachers connected with the Society of Friends.
- (b) A report on University Entrance Examinations in their bearing on the curricula of secondary schools, drawn up in December, 1901, by Professor E. A. Sonnenschein, Professor of Classics and Dean of the Faculty of Arts in the University of Birmingham.
- (c) An extract from the preface to the third edition of "Common Sense in Education and Teaching," by Mr. P. A. Barnett (London, Longmans), November, 1901.

## (a) RELIGIOUS INSTRUCTION IN OUR SCHOOLS.

## A LETTER

*Issued by the Executive of the Friends' Guild of Teachers.*

The subject of the religious education given in our schools has been discussed during the last few months in the periodical literature of our Society, and in a sitting of the yearly meeting. In the face of this concern, it seems right that the professional opinion in the Society should make its voice heard; for unquestionably the teachers have this subject at least as much at heart as anyone, and to them belongs the practical solution of the problem in the very life and work of the schools.

As to its supreme importance there cannot be two opinions. In an age when we are realizing more and more clearly that the aim of education is the formation of a strong, sensitive and balanced character—the attainment of a developed and complete life—it would be strange indeed if religion should fall into a subordinate place.

But this very view of education—a view that is broad and



deep and practical--will have important effects upon the teacher which may cause him to part company with his critics on some points: and these we think it desirable to indicate. It will lead him, for instance, to regard the acquisition of learning as an instrument, and not an end; again, he will hold throughout a strong belief in the unity of the human consciousness, and, as a consequence, the unity of education.

The teacher's subjects are not Mathematics, nor Latin, nor Scripture, nor Quakerism—they are boys and girls. The information imparted is, in a sense, a minor matter: the growth of the mind that assimilates it is all-important—growth in keenness, efficiency and power. Now it is clear that this growth of power is itself a vital part of the religious education of the school; and it is also clear that the degree to which this is attained, and still more the direction which it takes, will be the outcome of the whole tone and spirit of the place. A deficiency will not be met by adding on an extra hour in Church History. It is a question of the type of life embodied in the school community, and it is mainly by the greatness or meanness of this type that the religious education of the school should be judged.

With this proviso we would hasten to add that we have no thought of under-estimating the importance of what we may call religious instruction. It is round this that the discussion has largely centred, and it is with this that we wish chiefly to deal.

We may take it for granted that, alike in the Society at large and among the teachers in our schools—and it is to both that we wish to address ourselves—there is some dissatisfaction with the present state of things, and a unanimous desire for improvement and progress. There follows, therefore, the question of the direction in which we are to move, and on this head there are several points on which it is necessary for professional opinion to express itself clearly and emphatically.

The writer of a striking article in the pages of "Present Day Issues" says: "They (the schools) generally fail to supply the definite religious teaching of the character that is needed. This charge he repeats again and again, and the supply of such definite religious teaching is put forward as an urgent need in the interests of Christianity."

[illegible]

1. The first step is to identify the problem or goal. This involves understanding the current situation and what needs to be achieved.

lay brethren that if they wish to enter into the mind of the child they must put themselves back through a long course of growth—by no means a simple or obvious task: and this difference of capacity is of the greatest import in the present connection. Let us bear in mind, and insist in season and out of season, that general ideas and statements, phrases and dogmas, based upon data of experience which the child has never had, are to him a mere nothing; nay, they are worse than nothing—if fed upon them he will become an intellectual and spiritual sham, incapable of clear and honest thinking. Let us remember always, that unless interest is aroused the mind of the young child does not and cannot work; that what the boy does not intelligently attend to cannot by any possibility be educating him. To impart what is merely verbal knowledge is an educational crime.

The elements of all spiritual experience are possible to the child, and to develop these is the essence of religious teaching; but there are many religious expressions which are in reality abstract and theological, and these he may easily come to use without any realization of their meaning. Such conceptions are not to be prematurely thrust upon him; they can only be of value if personally reached by personal experience and inference. It is the teacher's task to lead from experience to judgment and reflection; but it is his bounden duty to shun like poison the inculcating of reflections where the data are unknown or cannot be appreciated.

If there is a desire then to press dogmatic teaching upon us—anything of the nature of abstract theology, or portions of church history whose interest lies almost exclusively in the same direction—let us hold fast to these root principles of education.

The thought is before us that many leave school with but a superficial entrance into Quakerism, and little enthusiasm for its ideals. But it is possible that Quaker doctrine may become distasteful just because it is doctrine. Surely it is better that this "spiritual view of life" should be taught both in secular and scripture history, in the consideration of natural life and individual biography, and taught as the national point of view, as indeed we believe it is. We need have no fear of losing our members through lack of "definite" doctrinal teaching at school. It is not doctrine that either attracts or holds the ordinary man to a section of the Church. Where our young people feel that they get the spiritual food which they need for the activities of life (a different type of food at different stages), there they will stay.

This leads us naturally to another side of the question: to what extent and in what fashion is it our duty to manufacture "Friends"? It has been urged that we ought to equip our boys and girls with ideas which shall last them for life. The practice of the Jesuits has been held up, not exactly as an example perhaps, but certainly as an object lesson.

Now as educators we must look at this with caution. If it

is meant that by the moral atmosphere of the school, by the spirit in which great questions are treated, by the standing influence of example, and by the uplifting of a pure and simple ideal, the Quaker attitude towards life may find a place in the children's minds; or if it is suggested that Quakerism past and present can be made of practical interest and value to some of them—then we are in hearty accord.

But it is most important that that we should resist anything which could by any chance hamper the free action of intelligence and judgment. Alike upon those who advise a course fraught with this danger, and upon those who would hinder the free and modern treatment of the Scriptures, we would urge very seriously that the fostering of a spirit of free and careful and reverent inquiry is not the function of "secular" teaching alone, but that in Biblical work too, and in all religious instruction, it is of the utmost importance. It is one of the first principles of education that it is our duty to arouse the spirit of investigation, and if we fail to do this in these Biblical matters we shall be false to a plain requirement, and our teaching will be unreal and inadequate and unfruitful, just as it would be in any other subject unintelligently taught.

It would seem to us then that progress will come, not in an increase of quantity, but in greater attention to educational quality, looked at from a wise and practical standpoint. We must treat our subject in such a way as to invest it with importance and with interest. We must bring to it the best intelligence and make it the instrument of the best training that we can supply. Does anyone sufficiently realize the vast importance of the attitude of the teacher, whether as to his intellectual interests or his spiritual vision? Carlyle says that soul is kindled by soul, and that to teach religion the one thing needful is to find a man who has religion: and this is a profound truth. And it is here that we should grasp the serious consequences of any step which would prevent the teacher from dealing with his subject in the way he thinks nearest the truth in the light of modern knowledge. By so doing the door will be shut upon a wealth of positive truth and influence. When freedom is gone, there comes a touch of paralysis upon the teacher's work, and the loss cannot be measured.

In "A Memory of Edward Thring," J. H. Skrine says: "Often 'I have thought that of more value to us than the positive knowledge imparted was the emotional emphasis with which he invested what we had not yet grasped as knowledge. The emotion was stored in the mind as a blank form, a vacant mould to be fitted later with the matter for thought. . . . Unconsciously he was following the true order of the higher teaching, making the passion for truth prepare the way for its possession.'"

We know well that the greatest of all religious influences are silent and secret; they may work in ways we know not of, and in hearts where we should least expect it: but we may well see to it that those who tend these influences and help them where they can, may be fitted and zealous for the work.

In conclusion, therefore, we would urge the members of our profession to realise the greatness of their duty, to hold fast to a belief in these silent influences of school life, and to yield no jot of educational principle for any seeming advantage that may be desired. We would ask them also to seek strenuously after the free development of their boys and girls, to feel a liberty of treatment in religious matters which shall enable each to give out the best that is in him, and to strive to make their teaching vigorous, enlightened, and thought producing. Surely a wealth of problems lie to hand in the Old and New Testaments, and in the religious activities of history of the present day, to which boys and girls may well be introduced.

To the Society at large we would put forward the view that the principles urged above are deserving of careful consideration in making any forward move. The quality of the teaching given in our schools is in measure in the hands of Friends; they have raised admirable buildings in many places—these are a small matter compared with the character of the staff. The freedom of the teacher, which is an indispensable condition of excellence, is a gift they can grant or withhold. And that we who are responsible for the term of school life may have the best chance and the best reward, we would press upon Friends the need of laying down foundations and awakening interest in the days of childhood, and of turning to best account the powers of those who go forth from our schools.

Finally, in spite of the criticisms we have felt it right to offer, we would express our gratitude to those who have roused the mind of the Church to the importance of this question, and our hope that, as a consequence, new power may come into our schools, and into all the life of the Society.

## (b) UNIVERSITY OF BIRMINGHAM.

### REPORT ON UNIVERSITY ENTRANCE EXAMINATIONS.

The great *desiderata* are:—

#### A. From the point of view of the Universities:

- (1) A fairly high standard of attainment in some particular branch of study, such as will ensure that the candidate is really fit to enter on a course of study in one of the Faculties. Absence of differentiation in the character of the entrance examination condemns the University to the rôle of a “verlängertes Gymnasium.”
- (2) A respectable standard of attainment in general knowledge, such as will ensure that no student in any Faculty shall be an uneducated man.

## B. From the point of view of the Schools:

- (1) The closest possible touch between the Entrance Examination to the University and the curricula of the various types of schools that feed the Universities.
- (2) Simplification of the examination system, whereby schools shall not be called upon to prepare for half-a-dozen different examinations, with varying requirements.

It is my belief that all these *desiderata* can be secured, but not by an examination of the character of the present London Matriculation Examination, which demands a minimum standard of attainment all round from all candidates, whatever their previous education has been, and whatever their special line of study is to be. Each type of school has its own legitimate aim and curriculum, and the attempt to force a common examination upon institutions of heterogeneous types necessarily involves doing violence to the curriculum of *all* of them, and consequently reacts badly upon their work. For, in failing to do justice to the characteristic products of each type of school, it discourages that kind of concentration of effort which, as distinct from "premature specialization," each type of school ought to cultivate. Such concentration need not and should not be allowed to involve the abandonment of the ideal of an all-round culture; but it is not inconsistent with considerable variety in the scope and length of the curriculum. The assumption that all schools ought to conform to a single type is flatly contradicted by the experience of all countries.

Nor does the University need that all its matriculated students should possess precisely the same qualifications. It would seem, then, *a priori* possible that an examination which did justice to the various types of schools might at the same time constitute a fitting avenue of approach to the several Faculties of the University. The various types of schools are many, and the Faculties of a University few; but, nevertheless, an Entrance Examination differentiated according to the requirements of Faculties might correspond roughly to the scope of the principal classes of schools, especially if it were framed on the lines of a Schools' Leaving Examination. And it might react favourably on the various types of schools by insisting that they should in no case neglect the element of all-round culture. Some "humane" or literary study should form part of the science school, some physical or natural science of the classical school, at some stage of the pupils' course.

But it does not follow that all the studies pursued by the pupil during his whole school career should be brought up for examination at the end of his course. Would it not be possible to secure the end of an all-round culture, partly by way of demanding that each candidate for matriculation should present a *curriculum vitæ*, showing what subjects he has studied and

what marks he obtained in them at school examinations? At the same time the main stress of the Matriculation Examination would be laid upon the subjects actually brought up for examination, as having been studied during the last year. At this examination there might be certain common papers for all candidates, such as an English essay and a mathematical paper; but candidates should be required to offer additional subjects, some (not all) of them up to a fairly high standard, according to a schedule based upon the main needs of the Faculty in which the candidate desires to enter. Such differentiation of the examination requirements according to the Faculty is already recognised, though not precisely in the above form, by the University of Birmingham.

My last *desideratum* (B. 2) would be secured in the most thorough way if it were possible to adopt the principle of inter-University co-operation, which is already a *fait accompli* in the Preliminary Examination of the four Scottish Universities. A Board representing the newer English Universities of London, Victoria, and possibly Durham,\* might render a service to education on a large scale by (i.) typing the different classes of schools that come into consideration in this connection; (ii.) securing such an approximation to uniformity in the standard of the Examination as would justify all the Universities concerned in accepting a certificate of the Board as sufficient evidence that the candidate was qualified to commence study in one of their Faculties.

E. A. SONNENSCHIN,

*Professor of Classics and Dean of the Faculty  
of Arts in the University of Birmingham.*

Dec. 16th, 1901.

### (c) THE CLAIMS OF *Literæ Humaniores* AND OF PHYSICAL SCIENCE.

All true educators, all who are concerned in training human beings rather than in the promotion of particular studies or researches, will do well to stand out squarely for a general education which shall leave no great side of healthy human interest unstimulated. They may safely neglect neither letters, by which the most truly human instincts are quickened, nor the sciences which put their children into intelligent relation with the non-sentient universe. They must not allow themselves, either as "Humanists" or "Realists," or called by any other bad name, to be hustled into starving or warping the souls committed to them. After all, education deals first and foremost with children, and not with separable parts of them; with their whole life, and not only with that part of it by which they are to make their living.

P. A. BARNETT.

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\* How far Wales would be likely to fall in I do not know.



## APPENDIX II.

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### ELECTIVE STUDIES AT HARVARD UNIVERSITY.

Since this paper was written, Professor Hanus of Harvard has published, in the *Harvard Graduates' Magazine* for March 1902, an analysis of testimony received from 987 Harvard graduates as to the general influence of the Harvard elective system of studies on their intellectual development and personal career. Of those who wrote, 712 said that the general influence of the elective system had been beneficial; 67 that it had been harmful: 28 that it had been neither; 180 are classed as doubtful or as not having given a specific reply. In answer to the question:—“Did you elect easy courses in College for the sake of evading hard work?” 173 said “Yes” and 566 said “No.” Many of the writers urged that students should receive more and better guidance in their choice of studies than some of the present graduates received when they were in College.

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**EDUCATION**

**IN THE**

**AMERICAN DEPENDENCIES.**

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(1) CUBA.

(2) PORTO RICO.

(3) THE PHILIPPINES.

APPENDIX I.—Regulations for the Public Schools  
of Cuba.

APPENDIX II.—The School Laws of the Island of  
Porto Rico.

APPENDIX III.—An Act Establishing a Department  
of Public Instruction in the Philippine Islands,  
etc., etc.



## EDUCATION IN THE AMERICAN DEPENDENCIES.

Each of the colonies acquired by America from Spain sprang a fresh educational problem on the Federal Government. American public opinion was unanimous in regarding the organisation of a free and democratic system of public instruction as one of the most important and urgent obligations towards the new possessions. So strong is the American conviction of the national benefits derived from education that the advisability of extending its advantages to the colonies was never so much as discussed in the numerous articles and reports devoted to the subject; it could be and was taken for granted. Differences of opinion there were as to the method of doing it, but as to the fact that, in one way or another, it had to be done, none at all. The American army proceeded to the conquest of the Spanish colonies, the sword in one hand and the school primer in the other. In every case the initiative in educational work had to be taken by the military authorities, and much of the practical organisation was carried out by them. In Cuba the preliminary inspection of the schools was entrusted to the divisional commanders; in Porto Rico the first education commissioners were military officers, while in both islands and in the Philippines the first American inspectors and teachers were drawn from the ranks, many of them proving sufficiently competent for permanent appointment on their discharge from military service. The resolution and energy with which the educational problem has been attacked may be gauged by the fact that within a few months, nay, almost a few weeks, of the American occupation, and in spite of the confusion resulting from the war, the educational organisations were at least provisionally complete and in working order; and when every allowance is made for the mistakes inevitable to so hasty an organisation, and which only need time for their correction, a nucleus of good sound achievement is left. The great thing was to get the children into the schools, and to set the schools to work with as little delay as possible. The question remains how far the people will be able to respond to the education provided for them. There is a danger of forcing on them more instruction than their mental capacity allows them to assimilate. American teachers and inspectors agree in finding the children quick, intelligent, and anxious to learn, and only time can show whether their apparent incapacity for sustained and concentrated effort is due to racial characteristics or merely to their utter lack of mental training. One of the United States inspectors in Porto Rico reports: "The pupils, I believe, both male and female, are capable of receiving a mental, moral, and practical training equal to that now received by the descendants of the Mexicans in Texas, Arizona, New Mexico, and

the southern parts of California ; but in nowise do I think they may receive the education of the Northern States."\* And the inspector of another district says : " I cannot help regarding with anxiety the various institutions which are being established, lest their sudden acquisition of knowledge dazzle the mind and defeat the purpose we have in view." The President of the Insular Board sounds a warning note in his report to the Secretary of War : " One of the most important educational questions here is how to give education an industrial character. A purely book education is not wanted here ; it may make better politicians than citizens. The result of extending partial education to the people of this island may be to provide a fertile ground for pernicious social theories."

For the present, at any rate, colonial educationists must rest content with a day of small things. As Dr. Brumbaugh, the present commissioner in Porto Rico, points out, the time has not come for advanced educational specialisations, which are wholly out of proportion to the present needs of the people. " Here are thousands of children, half-clothed, half-fed, half-housed, half-homed. They do not know how to read and write, neither do the people around them. At least 80 per cent. of all the people are illiterate. The crying and current need is a school that can reduce this appalling illiteracy."†

### (1) CUBA.‡

#### *Education under the Spanish Régime.*

Educational legislation in Cuba and Porto Rico under Spanish rule followed the lines of that of the Peninsula and makes a sufficiently brave show on paper, but the Spanish distrust of intellectual progress in the colonies not only neglected the execution of the laws but often actively hindered it.

The upper classes in Cuba have always displayed marked intellectual activity. Humboldt observed, a " great intellectual movement, and a youth endowed with a rare faculty for learning the sciences." And the very fairly adequate resources of higher and secondary instruction are almost entirely due to their efforts in the cause of education. Constantly thwarted by the Spanish Government, they often owed a great deal to the help of enlightened governors like General Luis de Las Casas (1790), who founded the *Sociedad Económica*, which from that time focussed all the educational efforts of the island. The University of Havana was founded by the Dominican Fathers in 1728, with the papal and royal consent,

\* English Supervisor's report for District 12. Report of the President of the Insular Board to the Secretary of War on Education in Porto Rico.

† Report of the Commissioner of Education for Porto Rico to the Secretary of the Interior, 1900.

‡ Based on the account of Cuban Education in the report of the U.S. Commissioner of Education, 1897-98, on an extract from Mr. Frye's report in the "School Journal," March 3rd, 1900, and on the report of the Cuban Secretary for Education.

on the model of the Spanish universities, the first rector being appointed by the King. Its intellectual standpoint was very antiquated, and progress was impeded for more than a century by the refusal of the Government to carry out the reforms which were repeatedly pressed on it. At last, after 1840, the medical faculty and the philosophical teaching were brought up to date. Meanwhile the economic society initiated some reforms, such as the foundation in 1793 of a chair and laboratory of applied chemistry. These and a chair of economics, established in 1818, were supported by public subscription. After the ten-year insurrection in 1880, a general reform of education was initiated by the Colonial Minister, and during the following decade plans of instruction were drawn up for the four faculties, philosophy and letters, natural sciences, law, and medicine. In 1889 the university had 1,046 students.

The foundation of the Jesuit College in 1717 gave a new impetus to secondary education, which until then had not risen above the level of a rather superficial study of Latin, and the number of colleges increased rapidly. In 1794 the economic society drew up a remarkable plan of secondary instruction, which included mathematics, drawing, physics, chemistry, natural history, botany, and anatomy. "The date and scope of this plan are noteworthy. Its spirit is quite modern."\* In 1827 the separation of secondary from higher instruction led to the foundation of five very efficient and well-staffed secondary colleges.

The educational reform of 1880 included the establishment in the capital of each province of a secondary institute, to which existing colleges and seminaries were affiliated. The curriculum of the Havana institute is typical of their practical scope, consisting of Latin and Spanish, rhetoric and poetry, Spanish and general history, psychology, logic and ethics, arithmetic and algebra, geometry and trigonometry, physics, chemistry, natural history, physiology and hygiene, agriculture, general and mercantile geography, commercial statistics, bookkeeping, political economy, practical commercial exercises, industrial chemistry and mechanics, French, English, and German. The same measure inaugurated a dental college at Havana and one or two special schools.

Havana also possesses a technical school, a school of art, and normal schools, founded in 1890 and 1891. During the last ten years of Spanish rule university and secondary education sank to a very low level of inefficiency: some university professors lived in Spain, and were replaced by substitutes; while the secondary colleges were chiefly remarkable for a not very creditable traffic in degrees.

But while the upper classes disposed of adequate educational resources, the provision of elementary instruction for the people was far to seek. In the province of Havana in 1893 only 5·8 per

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\* Mr. Packard's report to United States Commissioner of Education on Education in Cuba, Porto Rico, and the Philippines, 1897-98.



cent. of the population were receiving elementary instruction. The first public school in Cuba was opened in Havana by the Bethlehemite Fathers, late in the eighteenth century, and endowed by the generosity of a private citizen, Don Juan Carballo. The few schools in existence hardly deserved the name when, soon after its foundation, the Government deputed the organisation of public instruction to the Sociedad Económica. In 1816 a special section of the society devoted itself to education, receiving a grant of 32,000 dollars from the Government, with which aid it succeeded in giving a vigorous impulse to education. But the withdrawal of the subsidy in 1825 put an end to organised work, the society being left with no pecuniary resources, save such as could be derived from private subscriptions, theatrical performances, and masked balls, which could only suffice for spasmodic efforts.

Education laws there were in plenty. "Organic regulations" of primary instruction were promulgated in 1842, 1863, 1871, and 1880, but they were never effectually executed. There were neither proper school buildings nor material, nor inspection, the teachers' salaries were years in arrear, and the teachers appointed not for competency but for political and personal qualifications. Senor Manuel Rodriguez, in a pamphlet on Cuban education in 1891, speaks of the "profound intellectual lethargy and prostration of the lower classes," and goes on to say, "An odious distinction has come to exist in our system of education between the rich or powerful and those who have been disinherited by fortune. The child of poor parents has no means of attaining any education. It is true that the education of the better classes is profoundly utilitarian and egotistic, frankly calculated to further personal interests . . . but the situation of the plebeian classes is lamentable, as every notion of school, teacher, pupil, moral influence, and instruction is gradually becoming extinct. . . . As to primary schools in Cuba, there are practically none. The number of them has increased, but the principal fact in connection with them is their creation and insertion in the budget. They are neglected by the Government, who provides no inspectors; by the local juntas, whose members often do not know where they are; by the fathers of families, who do not believe in the gratuitous service; and by the teachers themselves, who have often to go unpaid."

The organic law of 1880, which was in force at the time of the American occupation, placed the control of education in the hands of the Governor General, aided by a superior educational council of twelve members. The ordinary members were appointed by the home government at the recommendation of the Governor General, while the rector of the University, the Vicar General, the Chief Accountant of the Treasury, and a member of the Colonial Council of Administration were ex-officio members. Each of the six provinces of the island had a provincial board, consisting of the governor of the province, an ecclesiastical representative of the diocese, an alderman of the municipal council of the capital of the

province, the directors of the normal school and secondary institute, the supervisor of primary education (when appointed), and three fathers of families appointed by the Governor General. There were also local or municipal boards under the presidency of the *alcalde* or mayor, consisting of one alderman, the parish priest, and three fathers of families. As actually administered, this system concentrated the entire direction of the schools in the hands of the Government, at the same time charging their support to the municipal authorities, who were naturally not eager to provide money in the expenditure of which they had no voice. In 1895 a primary instruction code was drawn up in two grades; the subjects in the lower grade were Christian doctrine and sacred history, reading, writing, elementary Spanish grammar and orthography, elementary arithmetic including weights and measures, elements of agriculture, industry or commerce according to the locality; the superior grade added to more advanced study of the same subjects; elements of geometry, linear drawing and surveying, rudiments of history and geography, especially Spanish, elements of physics and natural history adapted to the more common necessities of life, with needlework and elements of domestic hygiene for the girls.

#### *American Reorganisation.*

After the American occupation Mr. Alexis Frye was appointed superintendent of schools in Cuba, and he set to work at once. The great thing was to get the children into the schools. Only one-sixth of the population of school age was attending school at all, so that extra accommodation was needed for 462,000 children. Furniture, teaching material, and books were ordered from the States to make up for the utter lack of all three, and in six months 3,379 schools were at work with 3,500 teachers and 80,000 scholars. When the first distrust of everything new, and, above all, of everything American, had worn off, the educational work met with admirable local support. "The Cubans," says Mr. Frye, "are rallying round the schools as the emblem of future liberty." "The country," writes the acting commissioner of public schools in his report, "was clamouring for schools."

An administrative reorganisation was also taken in hand, and in 1899 an independent education department was established, with Dr. Juan Batista Barreiro as secretary for education, who was succeeded after a few months by Señor Enrique José Varona. The direct control of higher and secondary instruction devolves on the secretary, the administration of primary instruction being in the hands of a commissioner of public schools, and the educational organisation in those of a general superintendent of schools; both these posts are now filled by Cubans, aided by a council, of which the General Superintendent is president, consisting of the six provincial superintendents, one for each province. The Spanish provincial boards were

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abolished, and the municipal boards reorganised by direct ballot. The removal of the alcaides from the presidency of these local boards met with great opposition, but has had most salutary effects. The new education law,\* which was issued as a Government order in June, 1900, sub-divided the island into three classes of districts, each with a distinct educational organisation: first and second class city districts (cities with populations over 30,000 and 10,000 respectively), and rural, so-called municipal districts. Each district has a school board elected by the qualified voters of the district, the elections being held simultaneously with the municipal elections.

The subdivision of the island into these districts was relegated to the old municipal boards, aided by a special body of inspectors, who instructed the boards in this new duty. Before the arrival of the inspectors very few boards had taken any action at all, but with their help the work was completed, so that the new boards could be elected at the municipal elections in 1901 in all but a few districts, where local conditions presented peculiar difficulties. The special inspection will be continued with the new boards until they are thoroughly familiar with their duties. "It is the intention of the new School Law to give boards of education the greatest liberty possible in controlling the schools. Occasionally this large amount of liberty has to be abridged to a certain extent, but the rule is to increase the liberties, duties, and responsibilities of the boards rather than to diminish them. The central office of the Commissioner is now dealing with the detail work of the schools to a very small degree, considering that the schools have been established little more than a year."<sup>†</sup>

At the present time the whole expense of public education has to be borne by the insular government, and desirable in the interests of economy as may be the shifting of the burden on to the municipalities, this can only be done very gradually and not immediately, in view of the general financial disorganisation due to the war. It will be still longer before the local boards are in a position to provide school buildings. At the present moment the schools are held in thoroughly unsuitable rented premises. The enormous expense entailed by high rents and the difficulty—in the rural districts impossibility—of finding a sufficiency of accommodation, has led the Government to agree to a suggestion of the acting commissioner's, that it should erect as quickly as possible inexpensive temporary schools, the expense of which would soon be covered by the saving of rent, and which would be far preferable to the present very unsatisfactory and generally insanitary accommodation.

The law fixes a school year of thirty-six weeks, there being three months' vacation in the rainy season. The daily school lasts five

\* See Appendix I.

† Report of the Acting Commissioner of Public Schools.

hours. An annual school census is required by the order, and monthly reports have to be made by the teachers to the boards, and by the boards to the department. Thus the system is at work. Doubtless many alterations will have to be made, and many very necessary reforms, which must be a work of time, such as the grading of schools, special organisation for rural schools, more regular and more punctual attendance, better discipline, when the parents learn to support the teachers. (One great obstacle to the efficiency of the schools is the children's habit of studying aloud: "Each pupil opens his book and studies away almost at the top of his voice. When I arrive at a town I usually locate the schools by the noise which they make.")\* But the most crying need of all is for better trained teachers, and the means of training them. The manual for teachers, written and distributed to the schools by Mr. Frye, begins with the words, "Absolute freedom to every teacher to use his own methods of teaching."† But hitherto the teachers have not received the systematic training to enable them to profit by this liberty. It is not easy to find suitable American teachers with sufficient knowledge of Spanish, and the Cubans have been too long the victims of exploitation by Spanish officials not to be jealous of foreigners. So that until normal schools can be established, Cubans must avail themselves of the generous co-operation offered by American colleges,‡ and the Government have agreed to a suggestion made by Commissioner Hanna, that some two hundred teachers should be sent at the Government expense to graduate at American normal schools, and on their return be distributed over the island as inspectors to organise new methods of instruction. Meanwhile summer vacation training courses are held in each province, and last summer over a thousand Cuban teachers attended a course at Harvard as the guests of the University. Teachers' institutes are also being established in the provincial capitals, which teachers are obliged to attend monthly during the school year, to read and discuss papers, and hear lectures on educational subjects. But summer courses, valuable as they are, cannot compensate for the lack of systematic training, and the institutes, however useful to a highly educated and trained teaching staff, seem in the absence of this foundation dangerously likely to produce more facile and superficial talk than genuine knowledge. For a long time this lack of trained teachers must remain a difficulty. Buildings can be repaired and material imported, but an efficient body of teachers cannot be improvised. At present the women teachers greatly

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\* Report of Dr. Wilcox, Special Inspector of Schools.

† Extract from Mr. Frye's report. The "School Journal," March 3rd, 1900.

‡ For instance, the State of New York has offered a free training in its training colleges to forty-eight young Cubans and Porto Ricans, on the sole condition of their undertaking to teach in the islands for at least five years.

outnumber (in the proportion of nine to five) the men, and appear to be in every way superior to them. "The hope of Cuba," says Mr. Frye. "is not in her men, but in her women."

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Immediately on his appointment as secretary of education, Señor Varona undertook the reorganisation of the university and of the secondary institutes. The university had a staff of 107 professors to 380 students; in the faculty of letters there were fifteen professors to seven students, in that of science twenty-five to four students, and some professors had no students at all. Señor Varona's first step was to suspend those professors who had less than five students, he then reorganised the staff, and proceeded to arrange for reappointment to all chairs by competitive examination, to which the actual holders were admitted as well as new candidates.

He also reorganised the university in three faculties of law, letters and science, and medicine, amalgamating the faculties of science and letters and adding to them schools of pedagogics, engineering, architecture, and agriculture. The separate faculty of pharmacy was made into a school of the medical faculty, to which schools of midwifery and nursing were also added. The saving effected by this reorganisation was considerable, and provided a fund for the purchase of much-needed apparatus. The vacation was occupied with the rearrangement of the curricula of the faculties, provision of apparatus, and cleaning and repair of buildings, the Government providing a new building for lecture hall, laboratories, and a museum. When the new session opened in October the matriculations were nearly double those of the preceding year, being 662 as against 381, besides thirty women students in the midwifery and nursing schools,

The reform of secondary instruction took an entirely practical direction. Technical and commercial classes were transferred to the Havana secondary institute from the old professional school which was closed, courses of land surveying and valuation were opened at the different provincial institutes, these subjects being of special importance in Cuba, where much of the land is held in common, and boundaries are very uncertain. The institutes thus lost their purely secondary and assumed a partly technical character. The most satisfactory of the institutions founded under the old régime, the school of arts and trades, was granted a Government subsidy, and the Government is erecting new premises for it.

At the same time, the teaching staffs of all the institutes were reorganised and reappointed on the basis of competitive examination in the same way as the university staff. Reports of increased and larger enrolments come from all the provinces, as well as from the Havana institute. The opposition which these reforms aroused at first has been overcome by the general educational enthusiasm. Cubans are loyally anxious to show themselves equal to the duties and responsibilities of independence in this most important national obligation. The efforts of such enthusiasm may not always be according to discretion, but they at least furnish an indispensable motive power to reform.



(2) PORTO RICO.\*

There was in Porto Rico no such centre for intellectual activity as Cuba had in Havana. There is, indeed, a small circle of educated Porto Ricans, but they have been educated abroad, and far from being able to count on their co-operation, the President of the Insular Board of Education, Dr. Victor Clark, writes in his report to the Secretary for War: "Only from the very small intellectual minority in Porto Rico, trained in Europe, and imbued with European ideas of education and government, have we to anticipate active resistance to the introduction of the American school system and the English language."

Porto Rico had no institutions for higher education, and what resources of secondary instruction it possessed were entirely inadequate. In 1879 the Madrid Government refused permission to found a university in San Juan, so a private society provided a fund to pay the expenses of poor students at foreign universities. Later on, in 1888, the San Juan Athenæum did obtain leave to start higher courses, sanctioned by the Government as an "institute of higher studies," in connection with the University of Havana, but its financial resources were so limited that the scope of instruction had to be restricted, and it rapidly declined. Secondary instruction was entirely in the hands of private institutions until 1850, when, in order to stop the growing fashion amongst Porto Ricans of sending their sons to be educated in America, the Government founded a Jesuit college. It was completely eclipsed by the civil institute of secondary instruction, established during the short-lived republic in the seventies, which enjoyed so great a popularity that, although it was suppressed in the reactionary period which followed, it was reopened in 1882, and several academies in provincial towns were affiliated to it. In spite, however, of the enthusiasm which had attended its beginning, it soon became inefficient and discredited. After the American occupation a commission of Americans and Porto Ricans inspected its working and found it so unsatisfactory that it was closed, Dr. Ward testifying that "the instruction was as nearly worthless as possible." The girls' normal school, founded in 1890, was, if possible, even less efficient; the entrance examination consisted of writing three lines from dictation and solving one problem in arithmetic; no regularity of attendance was required, and by payment of double fees all attendance could be dispensed with.

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\* Based on the account of Porto Rican education in the United States Commissioner's report, 1897-98; on the report of the President of the Insular Board of Education to the Minister of War; on the reports of the Education Commissioners for Porto Rico to the Minister of the Interior; and on articles by Captain Gardner and Dr. Victor Clark on Porto Rican education in the "Forum" for February, 1899, and October, 1900.



and, on the testimony of the directress, teachers in the past were accustomed to work out the examinations for the pupils.

An industrial school for workmen, started in 1896, was the only one of several attempts at technical instruction which met with any success; over a hundred workmen attended each of the sessions, and its work was only put a stop to by the war.

There was no more efficient provision for primary than for secondary instruction. The organic decrees of General Messina in 1865 and of General Despujal in 1880 created coherent systems and codes of primary instruction, obligatory, and free to those who could not afford to pay fees, but the active opposition or apathy of the municipal bodies prevented anything like their effectual execution. General Messina's decree, which provided a normal school for teachers and a gradual enforcement of the proper qualifications and teachers' examinations, was opposed by the whole teaching staff, who naturally were not favourably disposed towards a scheme for their own replacement by more efficient substitutes. General Despujal's decree, coming in the reactionary period which followed the republic, was discredited by the political manipulation of the teaching staff, political and not professional qualifications being the basis of appointments, a fact which goes far to account for the inefficiency of the normal school.

The autonomous constitution of 1898 lasted too short a time to have any effect on the educational system, especially as disagreements in the Government led to the early resignation of the heads of the Education Department.

When the Americans took over the administration not more than twelve per cent. of the population\* could read or write; not one school in the island was housed in a building erected for school purposes; school furniture and fittings were practically non-existent, and the teaching was hardly worthy the name. Some idea of the state of things may be gained from the reports of the United States district inspectors.†

The supervisor for the district of San Juan says: "School-houses there are none. . . . The schools were held in rooms rented in ordinary and often overcrowded houses. A room 25 feet by 12 contained 110 children; one 22 by 13 contained 97. . . . In one house as many as a dozen families occupied the other parts of the building. . . . Furniture and school apparatus were of the most meagre description. Not one-fourth of the children have desk accommodation in the majority of the schools, and not more than one-half in the very best. The quantity of text books might safely be signified by zero. . . .

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\* Letter of General Davis to the Secretary for War, forwarding Dr. Clark's report. In San Juan the proportion of literates is 46 per cent. according to the census of 1889.

† Reports of the English supervisors for the sixteen districts, enclosed in Dr. Clark's report to the Secretary for War.

I do not know how to describe the methods they used. I have never seen them before. All I know is that the pupils studied at the tops of their voices, the teacher adding his full share to the confusion. . . . The children are bright, vivacious, and anxious to learn, particularly to learn English. . . . Among the poorer classes the home surroundings of the children are a great drawback, for they are poorly fed, poorly clothed, and literally they have no home life. . . . As a rule the teachers are very anxious to learn anything that will help them with their schools."

The supervisor of the third district says: "The school furniture is always insufficient, and even that which is in the schools is hardly fit for use. The old benches without backs are a torture to the children. In many schools the children carry their own benches and chairs to school with them. In other schools some of the pupils sit on the floor, while other schools use the floor for a blackboard. . . . Teachers do not seem to understand the real object of an examination either for themselves or for the pupils. The teachers were greatly disappointed because they could not see the questions before examination day. In the schools last summer, before the introduction of the new system, the answers to questions were committed to memory before examination day." Often the fee-paying minority formed a school aristocracy, monopolising the teachers' attention and the available seats.

The "superior" elementary schools seem to have differed from the others chiefly in name. "Some of the studies are glorified by high-sounding names; but when that disguise is removed, it is easy to recognise our old friends the three R's."\*

This system had not even the merit of economy. "The cost per pupil enrolled in the present year in Porto Rico is 58 cents higher than the average cost in the United States,"† one chief source of this high expenditure being the rents paid for school premises, which in many instances were not even weather-proof, so that it was impossible to open the schools in rainy weather.

Thus the difficulties in the path of educational reform make a formidable array. They may be summed up as the lack of proper buildings and appliances, the inefficiency of the teachers, the bad home influences to which many of the children are subject, and the poverty which sends them to school, or, worse still, keeps them at home ill-fed and ill-clothed. The lack of good roads and means of locomotion places great obstacles in the way of efficient administration and regular attendance in rural districts, and last, but very far from least, there is the absence always of adequate and often of any funds. Financial difficulties were partly to blame for the inertia of the local bodies, who were not always indifferent, as witness the

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\*"The School System of Porto Rico," by Captain A. P. Gardner.

†The Forum," February, 1899.

† Dr. Clark's report.

members of one laudable municipal board, who having no money to pay a teacher took turns at teaching in the school themselves.

To make matters worse came the hurricane of August, 1899, which made it a problem how to feed a population reduced to the verge of starvation, and by destroying the plantations destroyed the very source of local taxation, while the number of buildings reduced to ruins increased the difficulties of finding accommodation for the schools. In spite of all this, by the succeeding summer the educational administration was complete and the schools at work, with greatly increased attendances, and repaired and renovated premises; a certain amount of school furniture had been obtained from the States and distributed to the schools, as well as 10,000 "readers," and arrangements were made with American publishing houses for a supply of school books, charts, slates, etc. In order to meet the prospective demand some of the best publishers of school books began the issue of Spanish translations of their series. English and Spanish pedagogical works and reviews were provided for the teachers, and a bulletin in English and Spanish was drawn up and issued to them with teaching directions, advice as to the maintenance of discipline and school organisation, and some model lessons. This and the organisation of summer training schools and the advice and example of the United States inspectors were all that could be done to improve the teaching until the new normal school, for which a site was obtained at Fajardo, could make good the deficiency of trained teachers. American teachers were obtained from the States, but it was difficult to find teachers with a knowledge of Spanish, and there was a good deal of local jealousy. The normal school started work in October, 1900, with a comparatively small enrolment, which the present commissioner attributes to the difficulty of access to Fajardo. In December, 1898, a commissioner and sub-commissioner of education were appointed, with a bureau of education under the department of the interior, which was created at the same time. The bureau was afterwards replaced by an insular board of education, of which the sub-commissioner was president, consisting of nine members, with a majority of Porto Ricans. The island was divided into sixteen districts, to each of which a United States supervisor was appointed, who combined the duties of inspector and itinerant English teacher.

An education law was enacted by General Henry in 1899\* dividing the island into town and country districts for the election of school boards. The law instituted a school year of nine months, with five school days of five hours each in every week. It divided the primary school curriculum into major and minor subjects, the former consisting of Spanish, English (reading beginning in the second year), arithmetic, and geography; the latter of music, drawing, manual training, writing and spelling, hygiene, and morals. The present commissioner, Dr Brumbaugh, considers that this law "is not fitted to the conditions; at the coming session of the insular legisla-

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\* See Appendix II.

ture it should be wholly abrogated and a new law passed in its stead."

True to their faith in the educative and political advantages of local autonomy the Government made a loyal attempt to organise public instruction on its basis. At first the old Spanish local boards were retained till the municipal elections, when five school trustees were elected in each municipality. But the system broke down, as it had done under the Spanish dominion, from the apathy and incompetency of the local authorities. "Wherever the law touched the political life of the community, wherever it counted on the initiative or co-operation of local authorities, it proved inoperative. The forces that had been relied upon to start an educational revival from the bottom of society did not appear. The steps by which was demonstrated the necessity of the centralised and more or less imposed and paternal system of school administration, later adopted, are too numerous to be traced in full here. They constitute practically the whole history of school administration in the island during the last scholastic year. Out of the 800 towns and barrios of the island less than a score made any attempt to effect a local school organisation under the new law. They failed to provide buildings or elect teachers. Private interests clashed in the selection of buildings, and personal and political interests in the election of teachers. . . . In Ponce and many other towns a change in the political complexion of the local board led to an immediate discharge of teachers belonging to the party in the minority."\*

It was absolutely necessary to concentrate school administration in a great measure in the central department, and to allow it to perform functions which the local boards left undone. Even the payment of teachers had to be entrusted to the English supervisors, because the municipalities either could not or would not furnish the necessary sureties for their treasurers. And Dr. Brumbaugh considers it absolutely necessary that the department should have more control over the appointment of teachers.

But in spite of all difficulties the educational mill is turning. Twenty-four thousand children were enrolled in the schools in 1900, with an average attendance of 82 per cent. of the whole, being taught to read and write and "study" in healthier surroundings, with better appliances than have ever fallen to the lot of Porto Ricans before, and though much that had perforce to be done in haste has had, and will have to be, amended at leisure, and though the whole question of higher education has still to be attacked, when all that has been done amiss, and all that remains to do has been discounted, this is surely no mean balance of accomplishment for less than two years' work.

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\*Dr. Victor Clark, "Education in Porto Rico." "The Forum," October, 1900.

## (3) THE PHILIPPINES.\*

Whereas in Cuba and Porto Rico the main element of the population is of Spanish extraction, with a considerable negro minority, in the Philippines the Spanish element in the population is quite inconsiderable, and the main portion of the inhabitants belongs to the native mixed Malay stock, divided into a great number of tribes, and even families, with different dialects and languages. Jagor gives a list of over thirty separate dialects and languages in use in the archipelago. There is also a considerable number of Chinese. At the present time the population falls into three main divisions: the Christianised "Filipinos," the wild mountain tribes (both of Malay stock), and the Mahomedan inhabitants of Mindanao and the Lulu Archipelago; but even amongst the civilised Filipinos considerable diversity appears still to exist between the chief tribes, the Tagals, Ilocanos, and the Visayas. The Spaniards founded upon the old tribal organisation, a municipal system formally elective, but practically controlled by the Government and the priests. When the islands were conquered by the Spaniards in the sixteenth century, they were really taken possession of by the monks who accompanied the handful of soldiers as missionaries, and who soon acquired and have since maintained the real control and government of the islands. To them are due practically all the educational resources of the archipelago; they founded colleges and charitable institutions for Spaniards and natives, the Dominican college of Santo Tomas being created a university by Innocent X. in 1645, with the King of Spain as protector. In 1734, Clement XII. added a faculty of laws to the existing faculties of theology and arts. The title was changed to University of the Philippines in 1870, when the courses were reorganised, and faculties of medicine and pharmacy founded. In 1858 the university had 1,000 students, and in 1895-96 1,681 students matriculated successfully.

The rector of the university was ex-officio head of all the Dominican institutions for secondary instruction in the Archipelago. Of these there were a considerable number managed by the Dominicans and the Jesuits, besides girls' colleges under the direction of various orders of nuns. In 1895-96 the attendance at the different boys' colleges reached a total of 8,070 students. In 1863 and 1893, respectively, normal schools for men and women teachers were established by royal decree, the former committed to the Jesuit Fathers, the latter to the Augustine nuns of the Ascension. The men's school had a practising school attached to it. The curriculum was divided into three elementary and one superior course, which included the following subjects:—

*First Elementary Course.*—Christian doctrine, elements of sacred history, Spanish language, theory and practice of reading, theory

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\* Based on the reports of the United States Commissioner and on the Philippine Education Act (see Appendix III.).



and practice of writing, arithmetic, principles of general geography and the geography of the Philippines, plain drawing.

*Second Elementary Course.*—Catechism expounded, sacred history, history of Spain, theory and practice of reading and writing, arithmetic, Spanish grammar, plain drawing.

*Third Elementary Course.*—Catechism expounded. Spanish grammar, geometry, surveying, pedagogics, agriculture, plain drawing, deportment.

*Superior Course.*—Advanced pedagogics, legislation in force in primary instruction, ideas of religion and morality, universal history, algebra, industry and commerce, common phenomena of nature.

In the women's school the following subjects were taught:—Religion and morality, Spanish grammar, elocution, arithmetic, penmanship, general geography and geography of the Philippines, history of Spain and the Philippines, hygiene and domestic economy, practical industry, geometry, indoor exercise, pedagogics, natural science, music (vocal and instrumental), practical instruction in teaching, literature, drawing as applied to practical work.

All the secular instruction in the island was represented by the agricultural and nautical school, the school of art, and a technical school with a mercantile section. So that whereas in Cuba and Porto Rico there were organisations of popular education which, however inadequate, could yet serve as a basis for reform, in the Philippines, there being no secular education at all, the American administration had to start and create *de novo* a system of their own.

The religious orders successfully resisted repeated attempts by the Spanish Government to secularise education and establish a system of public elementary instruction. The monks and the secular clergy had schools in all the villages, and a very large proportion of the natives can read and write. In 1890 there were 1,016 schools for boys and 592 for girls in the archipelago, with an attendance of 98,761 boys and 78,352 girls. The instruction was given by native teachers from the normal school under strict clerical supervision, and consisted of religious doctrine, reading, writing, and arithmetic. Spanish has only recently and not generally been introduced as the school language, and repeated royal decrees since 1770 have failed to make it the common official speech.

The German ethnographer, Blumentritt, speaks highly of the intellectual capabilities and capacity for education of the natives. At the time of the Spanish conquest they had alphabets of their own, and could both read and write them. They have a passion for music; "the village vagabond will sit all day over his violin or flute, and even the meanest village has one or more bands of twenty or thirty pieces, and play much better than the regimental bands of the surrounding English colonies." They are emotional and imaginative, and excellent craftsmen, and often possess



considerable, though untrained, artistic skill. For languages they have a special aptitude: out of the 600 teachers who attended the preliminary term of the Manila normal school fully ten per cent. spoke English well, and most could follow instruction in English, and this in spite of very limited means of instruction. The United States Philippine commissioners remark that "the educated Filipinos are far more numerous than is generally supposed. The commission desire to bear the strongest testimony to the high range of their intelligence, and not only to their intellectual training, but also to their social refinement, as well as the grace and charm of their personal character."

In 1901, the Federal Government established a department of public instruction in Manila, under a general superintendent, appointed by the Philippine Commission, aided by an advisory board of four members, also appointed by the Commission, of which he is *ex-officio* president. The archipelago is to be divided into not more than ten school districts, the city of Manila being one, each of which will be under a divisional superintendent appointed by the general superintendent. In each municipality a local school board is to be constituted, with the alcalde as *ex-officio* president, consisting of four or six members, half being elected, and half appointed by the divisional superintendent, who has power, subject to the approval of the general superintendent, to remove the elected members if necessary. These boards have to visit the schools and report on the attendance and condition twice every month to the divisional superintendent, and inform the municipal council of the amount to be provided by local taxation for the schools in their district. The supervision and regulation of all public instruction lies with the general superintendent, and he must report on the general educational situation twice a year to the military governor. He is to establish a primary school in every pueblo of the archipelago, and secondary schools in such centres as he shall determine; also a normal school for native teachers, an industrial school in Manila, and an agricultural school in the island of Negros. The general superintendent is empowered by the Act to engage a thousand American teachers in the United States and distribute them as he thinks fit amongst the schools, giving the preference to towns which show their loyalty to the United States by their peaceful and orderly condition, and construct and maintain suitable school-houses from local resources.

The divisional superintendents have power to close unhealthy or unsuitable schools, pending the construction of new premises, and the appointment of native teachers rests with them. Each superintendent must report to the general superintendent on the agricultural condition in his district, with a view to the eventual establishment of local agricultural schools.

English is, as soon as possible, to be made the basis of instruction in the schools. Teachers are strictly forbidden to teach or criticise the doctrines of any Church, but the priest or minister of any

Church established in the pueblo may in person, or by a delegate, give religious instruction in the school-house for half-an-hour, three times a week, to pupils whose parents signify their desire for such instruction, in writing, to the divisional superintendent. Any minister using this opportunity for arousing disloyalty to the States, to discourage school attendance, or to interfere with discipline, may be prohibited from entering the school.

The primary school curriculum drawn up by the general superintendent consists of English language, arithmetic, geography, history of the United States, history of the Philippines, general history, penmanship, bookkeeping, physiology, civil government, nature studies, and music. The school year is to last ten months, with four hours' lessons each day for the children, the native teachers having an hour's English instruction daily. Summer normal courses for teachers will be held in the different provincial capitals. Some 800 American teachers are already at work in the islands, but the lack of means of communication, and the still unsettled state of the remoter parts of the country, render their distribution amongst the schools somewhat difficult and slow. The distance from America rendered the selection of American teachers by the Philippine department so difficult that the Superintendent availed himself of the help of normal schools, colleges and educational officials in the United States, to whom he delegated limited powers of appointment. The generous treatment accorded by the American authorities, affording facilities for improvement and promotion, have ensured the co-operation of the native teachers; but any secular school system could only meet with, and has indeed aroused, the active hostility of the clerical authorities. These, and a crying need for more funds, are some of the difficulties in the path of educational reform in the archipelago, the advance of which is regarded as of paramount importance by the military authorities as the most vital factor in the pacification of the colony.

MARY E. TANNER.

## APPENDIX I.

## REGULATIONS FOR THE PUBLIC SCHOOLS OF CUBA.

[The following regulations were issued June 30, 1900, by the Military Governor of Cuba, upon the recommendation of the Secretary of Public Instruction.]

## COMMISSIONER OF PUBLIC SCHOOLS.

*Commissioner the chief executive officer.*—There shall be a chief executive officer for the public schools of the island, to be appointed by the military governor and to be known as the commissioner of public schools, and in the performance of his duties as such he shall be guided by this order, and by such rules and orders as may be promulgated hereafter by the military governor or the secretary of public instruction.

*Duties of commissioner.*—It shall be the duty of the commissioner of public schools to see that all orders and instructions from the proper authority pertaining to the public schools of the island are rigidly and impartially enforced. He shall make annually, to the secretary of public instruction, a report of the public schools of the island, which shall contain an abstract of the reports herein required to be made to him, and such other information as he may deem valuable ; and he shall make such special reports as may be required by the military governor or secretary of public instruction. It shall be his further duty to superintend the building of schoolhouses throughout the island, and direct the purchase and disposition of such supplies as the military governor may authorize.

## BOARD OF SUPERINTENDENTS.

*Composition of the board.*—There shall be a superintendent of the public schools of the island, to be appointed by the military governor upon the recommendation of the secretary of public instruction and to be known as the island superintendent of public schools, who shall be assisted in each province in the performance of his duties by an assistant to be appointed in the same manner as the island superintendent, and to be known as the provincial superintendent of public schools ; the island superintendent as president, with the provincial superintendents as members, shall constitute a board of superintendents for the public schools of the island.

*Duties of board and individual superintendents.*—Each provincial superintendent is the assistant and agent of the commissioner of public schools in the general government and management of the public schools of the island. The board of superintendents shall fix upon and introduce proper methods of teaching in the public schools of Cuba, and shall select text-books, and arrange the courses of studies for the different grades of public schools throughout the island ; and in all schools of the island which are of the same grade, the same text-books and the same courses of study shall be used.

## CLASSIFICATION OF DISTRICTS.

*Classes of school districts.*—The island is hereby divided into school districts to be styled, respectively city districts of the first class, city districts of the second class, and municipal districts.

*City districts of the first class.*—Each city of the island having a population of 30,000 or more by the last preceding census of the island shall constitute a city district of the first class. Under this paragraph the fol-

lowing cities are announced as forming city districts of the first class : Habana, Santiago, Matanzas, Cienfuegos, and Puerto Principe.

*City districts of the second class.*—Each city having a population of more than 10,000 and less than 30,000 by the last preceding census of the island shall constitute a city district of the second class. Under this paragraph the following cities are announced as forming city districts of the second class : Cardenas, Manzanillo, Guanabacoa, Santa Clara, Sancti Spiritus, Regla, Trinidad, and Sagua la Grande.

*Municipal districts.*—Each organized municipality, exclusive of any of its territory included in a city district, shall constitute a school district, to be styled a municipal district.

#### CITY DISTRICTS OF THE FIRST CLASS.

*Board of education.*—The board of education in city districts of the first class shall consist of a school council and a school director.

*School council.*—A legislative power and authority shall be vested in the school council, which shall consist of seven members to be elected by the qualified electors residing in such district, and no two members of the council shall be residents of the same ward.

*School council election and term.*—The first election for such council shall be held on the same day as the annual municipal elections in 1901, at which election three members of the council shall be elected for a term of two years, and their successors shall be elected at the annual municipal election for 1903, and biennially thereafter, and four members of the council shall at such election in 1901 be elected for a term of one year, and their successors shall be elected at the annual municipal election of 1902 for a term of two years, and biennially thereafter, and all members of the council shall serve until their successors are elected and qualify.

*President and clerk.*—The council shall organize annually by choosing one of their members president, also a clerk, who shall not be a member thereof, and who shall receive a salary to be fixed by the council which shall not exceed \$1,500 per year.

*Teachers and employees.*—The council shall provide for the appointment of all necessary teachers and employees, and prescribe their duties and fix their compensation.

*School director : election and powers.*—The executive power and authority shall be vested in the school director, and in the performance of his duties as chief executive officer he shall be guided by this order, and by such rules and orders as may be promulgated by proper authority, and by the resolutions of the council. He shall be elected by the qualified electors of the districts.

He shall devote his entire time to the duties of his office, and shall receive an annual salary of \$2,000, payable monthly ; and before entering upon the discharge of the duties of his office shall give bond, to be approved by the board, for the faithful performance thereof, in the sum of \$5,000, which bond shall be deposited with the clerk within ten days from date of election and preserved by him. The director shall report to the council annually, or oftener, if required, as to all matters under his supervision ; he shall attend all meetings of the council and may take part in its deliberations, subject to its rules, but shall not have the right to vote except in case of a tie.

*Superintendent of instruction.*—The council shall appoint a superintendent of instruction, who shall remain in office during good behaviour, and the council may at any time, for sufficient cause, remove him ; but the order for such removal shall be in writing, specifying the cause therefor, and shall be entered upon the records of the council.

*Powers and duties.*—The superintendent of instruction shall have the sole power to appoint and discharge, with the approval of the council, all assistants and teachers authorized by the council to be employed, and

shall report to the council, in writing, quarterly, and oftener if necessary, as to all matters under his supervision, and may be required by the council to attend any or all of its meetings ; and except as otherwise provided in this order all employees of the board of education shall be appointed or employed by the school director.

*Meetings of the board of education, regular and special.*—The board of education shall hold regular meetings once every two weeks, and may hold such special meetings as it may deem necessary. It may fill all vacancies that occur in the board until the next annual election, and may make such rules and regulations for its own government as it may deem necessary, but such rules and regulations must be consistent with this order.

#### CITY DISTRICTS OF THE SECOND CLASS.

*Board of education.*—In city districts of the second class the board of education shall consist of six members, who shall be judicious and competent persons with the qualifications of an elector therein, and shall be elected by ballot at the annual municipal election in 1901 by the qualified electors of the city.

*Elections.*—Those elected shall be divided, upon the fifteenth day thereafter, by lot, into three equal classes ; the members of the first class shall serve for one year, the members of the second class for two years, and the members of the third class for three years. All elections of members for the board of education thereafter shall be held at the regular municipal election annually, and all members shall serve until their successors are elected and qualified.

*Judges of election.*—The election for members of the board of education in city districts of the second class shall be held by the same judges and clerks provided for the municipal election, and returns of such election, duly certified as in other cases, shall be made within five days to the clerk of the board of education of any such city.

The board of education shall hold regular meetings once every two weeks, and may hold such special meetings as it may deem necessary. It may fill all vacancies that occur in the board until the next annual election, and may make such rules and regulations for its own government as it may deem necessary, but such rules and regulations must be consistent with this order. It shall organize annually by choosing one of its members president.

*Municipal board of education.*—The board of education of each municipal district shall consist of the mayor of the municipality, who shall be president of the board, and one director elected for a term of three years from each subdistrict ; provided, that if the number of subdistricts in any municipal district exceeds fifteen the board of education shall consist, exclusive of the president, of those directors who have one and two years still to serve ; and that if the number of subdistricts exceed twenty-four the board of education shall consist, exclusive of the president, of those directors who have but one year to serve. The director of each subdistrict is the representative of the inhabitants of that subdistrict in educational matters, and if not a member of the board of education shall represent to the board in writing the wants of his subdistrict.

*Election and qualification of directors.*—There shall be elected by ballot as soon as possible after paragraph following of this order has been complied with in each subdistrict, by the qualified electors thereof, one competent person, to be styled director. These directors shall meet at the office of the mayor of the municipality, and shall be divided upon the third Saturday after such election by lot into three classes, as nearly equal as possible. The directors of the first class shall serve for the term of one year, the directors of the second class for two years, and the directors of the third class for three years. All elections of directors thereafter shall be held on the last Saturday of April annually, and all directors shall serve until their successors are elected and qualify.



## REORGANIZATION OF DISTRICTS.

*Division into subdistricts.*—The board of education of each municipal district provided for in order No. 226 shall at once divide its municipal district, exclusive of whatever territory may be comprised in a city district of the first or second class, into subdistricts. No subdistrict shall contain less than sixty resident scholars by enumeration, except in cases where, in the opinion of the board, it is absolutely necessary to reduce the number. The division shall be so made that the number of teachers shall not be increased over that employed at the time this order is received.

*Number of schools in subdistrict.*—No subdistrict shall be without at least one school, open to children of both sexes, or if not such a mixed school, then at least two schools, one for boys and one for girls. In rural subdistricts it is preferable to have but one mixed school to a subdistrict. In cities of either the first or second class subdistricts may have one or more schools for girls, and one or more for boys. Schools of any subdistrict shall be in the same building, unless this is absolutely impossible, in which case they shall be as near together as possible.

## REPORTS.

*Annual report of board of education.*—The board of education of each district shall make a report to the provisional superintendent, on or before the last day of August of each year, containing a statement of the expenditures of the board, the number of schools sustained, the length of time such schools were sustained, the enrollment of pupils, the average monthly enrollment, and average daily attendance, the number of teachers employed and their salaries, the number of schoolhouses and schoolrooms, and such other items as the commissioner of public schools may require.

## PROVISIONS APPLYING TO ALL SCHOOL BOARDS.

*What property the boards have title to.*—All property, real or personal, which has heretofore vested in and is now held by any board of education for the use of public or common schools in any district is hereby vested in the board of education provided for in this order, and having under this order jurisdiction and control of the schools in such district.

*School property exempt from taxation.*—All property, real or personal, vested in any board of education shall be exempt from tax and from sale on execution or other writ or order in the nature of an execution.

*Illegal use of schoolhouses.*—Schoolrooms shall be secured in healthful localities, and shall be clean, well ventilated, and well lighted, and all rooms, buildings, or parts of buildings rented or assigned for school use shall be used exclusively for school purposes, and no teacher, janitor, or other person shall dwell therein.

*Sufficient schools must be provided.*—Each board of education shall establish a sufficient number of schools to provide for the free education of the youth of school age in the district under its control, at such places as will be most convenient for the attendance of the largest number of such youth, and shall continue each and every day school so established thirty-six weeks in each school year; and each municipal board of education shall establish at least one primary school in each subdistrict under its control.\*

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\* Boards of education may, in their discretion, permit boys and girls of school age to attend the same school; and it is hoped that, at least with young children, this plan will prevail, as it will tend to develop that high respect between the sexes which is the basis of true womanhood and manhood. In small towns and in the country it may often be the only means of establishing sufficient schools.



*Schools at children's homes and orphan asylums.*—The board of any district in which a children's home or orphans' asylum is or may be established by law shall, when requested by the directors of such children's home or orphans' asylum, establish in such home or asylum a separate school, so as to afford to the children therein, as far as practicable, the advantages and privileges of the common-school education. All schools so established in any such home or asylum shall be under the control and management of the directors of such institution, which directors shall, in the control and management of such schools, as far as practicable, be subject to the same laws that boards of education and other school officers are who have charge of the common schools of such district; and the teacher of any such school so established shall make all reports required by this order as any other teacher of the district and to the same officers.

*Evening schools.*—In any district, or part thereof, parents or guardians of children of school age may petition the board of education to organize an evening school. The petition shall contain the names of not less than twenty-five youths of school age who will attend such school, and who, for reasons satisfactory to the board, are prevented from attending day school. Upon receiving such petition the board of education shall provide a suitable room for the evening school and employ a competent person, who holds a regularly issued teacher's certificate, to teach it. Such board may discontinue any such evening school when the average evening attendance for any month falls below twelve.

*Who may be admitted to public schools.*—Schools of each district shall be free to all unmarried youth between six and eighteen years of age who are children, wards, or apprentices of actual residents of the district, including children of proper age who are or may be inmates of a children's home or orphans' asylum located in any such school district, provided that all unmarried youth of school age living apart from their parents or guardians and who work to support themselves by their own labour shall be entitled to attend school free in the district in which they are employed. The several boards shall make such assignment of the unmarried youth of their respective districts to the schools established by them as will in their opinion best promote the interests of education in their district.

*Suspension and expulsion of pupils.*—No pupil shall be suspended from school by a superintendent or teacher except for such time as may be necessary to convene the board of education, and no pupil shall be expelled except by a vote of two-thirds of such board, and not until the parent or guardian of the offending pupil has been notified of the proposed expulsion and permitted to be heard against the same, and no pupil shall be suspended or expelled from any school beyond the current term thereof.

*Boards to control school and appoint officers.*—Each board of education shall have the management and control of the public schools of the district, except as otherwise provided for boards of education in city districts, with full power to appoint principals, teachers, janitors, and other employees, and fix their salaries or pay, provided such salaries each month do not exceed the following. In Habana, \$65; in the capitals of provinces and in Cardenas and Cienfuegos, \$50; in all other municipalities, \$40, except for all teachers in schools with an average attendance of less than thirty pupils, in which case the salary shall not exceed \$30, and any person serving as a regular teacher of a school and also having the supervision of not less than two other schools shall be rated as a principal on the rolls and receive the additional sum of \$10 per month. Such salaries or pay may be increased, but shall not be diminished during the term for which the appointment is made, but no person shall be appointed for a longer time than one year, and the board of education may dismiss any appointee for inefficiency, neglect of duty, immorality, or improper conduct. Women only shall be employed in schools for girls; either women or men may be employed in schools for boys. For similar services women and men shall at all times receive equal pay.

## ENUMERATION.

*Yearly enumeration of school youth.*—There shall be taken in each district annually during the two weeks ending on the fourth Saturday of March an enumeration of all unmarried youths, denoting sex, between six and eighteen years of age, resident within the district and not temporarily there, designating also the number between six and eight years of age; the number between eight and fourteen years of age, the number between fourteen and sixteen years of age, and the number between sixteen and eighteen years of age.

## ATTENDANCE.

*Time of attendance.*—Every parent, guardian, or other person having charge of any child between the ages of six and fourteen years, shall send such child to a public, private, or parochial school not less than twenty weeks, at least ten weeks of which, commencing with the first four weeks of the school year, shall be consecutive, occasional daily absence for reasonable excuse excepted.

*Excusal from such attendance.*—Unless the child is excused from such attendance by the president of the board of education in municipal districts, or city districts of the second class, and the superintendent of instruction in city districts of the first class, upon a satisfactory showing either that the bodily or mental condition of the child does not permit of its attending school, or that the child is being instructed at home by a person qualified, in the opinion of the clerk of the board of education, to teach writing, spelling, reading, geography, and arithmetic.

*Employment of children under fourteen years of age.*—No child under the age of fourteen years shall be employed by any person, company, or corporation during the school term, and while the public schools are in session, unless the parent, guardian, or person in charge of such child shall have fully complied with the requirements of the preceding paragraph. Every person, company, or corporation shall require proof of such compliance before employing any such minor, and shall make and keep a written record of the proof given, and shall, upon the request of the truant officer hereinafter provided for, permit him to examine such record. Any person, company, or corporation employing any child contrary to the provisions of this paragraph shall be fined not less than \$25, nor more than \$50.

*When child is exempt.*—When any truant officer is satisfied that any child compelled to attend school by the provisions preceding is unable to attend school because absolutely required to work, at home or elsewhere, in order to support itself or help support or care for others legally entitled to its support who are unable to support or care for themselves, the truant officer shall report the case to the board of education, who may exempt such child from the provisions preceding.

*Duty of commissioner of public schools.*—It shall be the duty of the commissioner of public schools from time to time, whenever deemed advisable, to formulate and forward to boards of education throughout the island regulations and suggestions for the instruction and guidance of all persons charged with the enforcement of the preceding six paragraphs or any of their provisions.

## TEACHERS' INSTITUTE.

*Organization by board of superintendents.*—It shall be the duty of the board of superintendents to organize in each province at least one teachers' institute, and more than one if, in the opinion of the board of superintendents, one will not accommodate all the teachers of the province.

*Number and salaries of instructors and lecturers.*—The board of superintendents shall determine upon the number and salaries of instructors and lecturers of any institute and the length of each session of the institute, provided that no session shall continue less than four school weeks.

*Attendance of teachers necessary to collect vacation salaries.*—Each teacher shall attend at least one complete session of the institute in order to obtain his salary during the vacation period.

*Institute fund.*—As a condition of attending the institute each teacher shall deposit with an individual, to be designated by the board of superintendents, the amount of \$5, which shall form the institute fund. This fund shall be used to cover the necessary expenses of the institute, and shall be expended and accounted for as directed in order from time to time. If the expense of the institute exceed in amount the institute fund, the unpaid balance shall be paid from the island revenues. If the institute fund for any year exceeds the expenses of the institute for that year, such excess shall go to form a sinking fund for the support of the institute.

*Organization of institute.*—The board of superintendents shall, at their regular meeting in October, 1900, decide upon a plan of organization of the teachers' institutes of the island for the school years of 1900–1901 and submit the same to the secretary of public instruction and the military governor for approval as soon thereafter as possible.

#### BOARD OF EXAMINERS.

*Plans for examinations of teachers.*—The board of superintendents shall, at their regular meeting in October, 1900, decide upon a plan for the examination of the teachers of the island as to their qualification to teach, and shall present the same in writing to the military governor, through the secretary of public instruction, as soon thereafter as possible for his approval.

*Certificate a requisite to employment of teacher.*—After the approval and publication of the plan mentioned in the preceding paragraph, no person shall be employed as teacher in a common school who has not obtained from a board of examiners having competent jurisdiction a certificate of good moral character and that he or she is qualified to teach such branches of study as the board of superintendents may decide upon and possesses adequate knowledge of the theory and practice of teaching.

All salaries and fines mentioned in this order shall be payable in United States currency or its equivalent.

J. B. HICKEY, Assistant Adjutant-General.

## APPENDIX II.

### THE SCHOOL LAWS OF THE ISLAND OF PORTO RICO.

[Enacted by order of General Guy V. Henry, Major-General Volunteers, Commanding, May 1st, 1899.]

#### PART ONE.

#### THE ORGANIC LAW OF SCHOOL DISTRICTS.

San Juan, May 1st, 1899.

An Order Authorizing the Establishment of School Districts.

The following law authorizing the establishment of school districts in Puerto Rico and providing regulations for conducting the business of the same, is hereby declared to be in operation in this Island, dating from the day of its publication.

Districts are urged to organize under this law, although it is permissive, not mandatory, and the people of Puerto Rico are assured that their success in conducting this fundamental though elementary form of self government will do much to open the way to a broader exercise by them of similar powers.

Very respectfully submitted.

JOHN EATON.

Director of Public Instruction.

Approved : FRANCISCO DEL VALLE Y ATILES, Secretary of Interior.

Approved : GUY V. HENRY, Maj. Gen. Vols., Commanding.

## I.—PRELIMINARY.

(1) For school purposes the Island of Puerto Rico is hereby declared to be divided into towns and barrios.

A town is a centre of population, of definite and circumscribed limits, having two hundred or more legal voters under the provisions of this act, and corresponding in general with the CASCO DE POBLACION of the Spanish law.

A barrio is a country district, of definite limits, containing less than two hundred legal voters under the provisions of this act.

(2) School districts shall be of two kinds, town districts and barrio districts.

(3) Every school district shall be conterminous with the barrio or barrios, or the town within which it is established, and is hereby declared to be a body corporate, with power to contract or be contracted with, to sue or to be sued, in any court of this island having competent jurisdiction.

Every school district shall be known by the name of the barrio or town within which it is established, but when it includes more than one barrio, it shall take its name from the barrio within which the school is located.

(4) The corporate powers of a district can be exercised only over schools within the territorial limits of that district. As a corporation its powers are independent of those of any other political or municipal corporation, and the present jurisdiction of municipal corporations in school affairs ceases wherever districts are organized, with the perfection of such organization.

(5) Every district shall hold, in the corporate name of the district, the title of lands and other property which is now owned, or may hereafter be acquired for school purposes in such districts, and no property held by school districts for public school purposes shall be subject to taxation.

(6) The legal voters of any school district shall be persons of the age of twenty-one years and upwards, of either sex, who are American citizens, who have resided in said district for the six months immediately previous to the signing of the petition for organization or to any school meeting, and who are able to read and write.

## II.—ORGANIZATION.

The citizens of any barrio, any group of adjacent barrios, or any town may organize a school district conterminous with their barrio, barrios or town, in the following manner :—

a. Five or more legal voters of the district to be established shall present to the Governor General of the Island a petition setting forth the following facts : (1) the object of the petition ; (2) the name of the barrio, barrios or town in which they reside ; (3) the number of persons residing in said district according to last official census ; (4) the number of children of school age therein ; (5) the assessed valuation of real property therein ; (6) the names and locations of schools already established therein ; (7) a description and valuation of school property owned by the proposed district ; (8) the signature of the petitioners.

b. The Governor General upon receipt of said petition, will publish the same for three successive days in the Official Gazette, with an invitation to residents of the proposed district to present any objections they may have to its being granted.

c. Within ten days of the third publication of the petition, the Governor General will establish the proposed district by announcement in the same publication, or communicate his refusal to do so to the Alcalde of the municipality within which the district would lie.

(2) Where a district composed of more than one barrio desires to separate into two or more districts, or when two or more districts desire to unite to form one district, the same may be accomplished by petition, and the Governor-General will announce in granting the petition such regulations

for the division of school property held by the districts, or for the adjustment of their respective obligations in relation to property and bonds, as may seem to him advisable in each individual case.

(3) When a district has been established, it shall be the duty of the Alcalde of the municipality within which it lies, within three days of the receipt of the Governor General's announcement, to cause to be published by written notice, to be posted in at least three conspicuous places in the proposed district, the place and date of a district school meeting, or a district election, to occur within thirty days of the date of advertisement. If on account of accident or the negligence of voters, such meeting or election does not occur at date and place announced, subsequent dates shall be similarly named by the Alcalde not more than ten days apart, until a legal meeting or election is effected.

(4) When from default of legal voters or other reasons it seems advisable to the Governor General to disestablish a school district, he may do so, placing its schools under the immediate direction of the Insular Government.

### III.—BARRIO DISTRICTS, SCHOOL MEETINGS, POWERS OF SCHOOL MEETINGS.

(1) A district school meeting may be called by the Alcalde of the municipality within which it is located, by the President of the Board of Trustees, or in case of his absence by any trustee, by written notice, naming the place and date, posted in at least three conspicuous places in the district.

(2) The legal voters of school districts when lawfully assembled, not less than five being present, shall have power by majority votes of those present—

- a. To appoint a moderator and a clerk pro tempore.
- b. To adjourn from time to time.
- c. To elect school trustees by ballot.
- d. To establish schools.
- e. To designate a site for a school house.
- f. To vote an amount of money to be raised by tax upon the taxable property of the district.
- g. To authorize the trustees to raise such additional amounts of money as the district may determine.
- h. To repeal or modify their proceedings from time to time in accordance with the powers conferred by this act.

(3) Whenever the purpose of a school meeting or election is to authorize taxation or the bonding of the district, such meeting or election shall not be legal for said purpose unless its object be advertised in the same manner as the time and place of meeting for at least thirty days previous.

No district may levy a tax of more than ten mills on the dollar, or bond itself for more than ten per cent. of its assessed valuation.

### IV.—TOWN DISTRICTS, ELECTIONS, POWERS OF PRESIDENT.

(1) The trustees of town districts shall be five in number, elected by twos and threes upon alternate years, and their term shall be two years or until their successors are elected. In the first election of any district two members shall be elected for two and three members for one year.

(2) In addition to the powers hereinafter granted to district trustees by this act, the board of trustees of a town district shall exercise the powers granted to school meetings in barrio districts by the previous article of this law.

(3) Regular annual meetings and elections shall be held the second Monday in July ; special elections may be held by a call of trustees, approved by the Secretary of the Interior.

(4) The method of electing trustees in town districts shall be determined by the Bureau of Education, acting under the authority of the Secretary of the Interior, subject to the following limitations :

- a. The ballot shall be secret according to the Australian system.



*b.* The ballots shall be printed by the Bureau of Education, and shall contain the names of all candidates for election as trustees who shall present petitions signed by twenty-five registered voters of the district to that effect.

*c.* The election board, which shall preside at the voting table and count the vote, shall consist of legal voters appointed by the candidates for election, and each candidate whose name appears upon the printed ballot shall appoint one member of the board.

*d.* The printed ballots shall not indicate in any way the political party to which the candidates respectively belong.

*e.* After the count is completed, the ballots shall be carefully packed in a sealed package, and mailed to the Bureau of Education, for preservation until the next election.

*f.* By a majority vote the board of trustees may submit any question of taxation, bonding, or school policy to the voters at any regular or special election, and such question shall be printed upon the regular or special ballot together with the names of the candidates, and the decision of the voters shall be binding upon the trustees.

*g.* The Bureau of Education shall publish a handbook of information for voters at school elections, to be distributed free to the legal voters of town districts, containing the detailed provisions for registration of voters and holding elections, and such handbook, when duly authorized by the Secretary of the Interior, shall have the same legal force as the other portions of this act.

#### V.—DISTRICT OFFICERS.

(1) The officers of a school district shall be five trustees who shall be legal voters residing in the district, who shall serve without compensation, and who shall be elected annually in barrios districts, or biennially in city districts, and serve until their successors are elected.

(2) The trustees shall meet monthly or oftener as required, and three shall constitute a quorum for the transaction of business. They shall elect from their own number a president, a clerk and a treasurer of the district, to serve until their successors are appointed.

(3) The president shall serve without compensation; he shall call the school meetings and trustee's meetings, and preside at the same. In his absence any other trustee may perform his duties.

(4) The treasurer of each district shall receive and pay out all moneys appropriated to or belonging to his district, and keep an accurate account of the public school funds received from the Insular Treasury and of the district funds raised by tax, entering in his books all receipts, so as to indicate the sources from which received and the objects to which made applicable; and disbursements shall be recorded so as to show for what purpose the money was paid.

(5) The treasurer shall present and file with the clerk of his district three days before his successor is elected a report in writing, signed by him and containing a statement of all moneys received by him within the year preceding and of all his disbursements, exhibiting vouchers therefor; also the amount received by him of taxes assessed upon the taxable property of the district within the year, purposes for which they were assessed, the amounts assessed for each purpose, which report shall be recorded by the clerk, and if it appears that there is any balance in the hands of the treasurer, he shall pay such balance into the hands of his successor as soon as he executes the bond required as a condition of holding the office of treasurer, and his sureties justify on such bond. The President and clerk shall examine said report, and if correct they shall endorse the same and file a duplicate copy with the Bureau of Education.

When said report is approved as above stated and endorsed, the voters at the annual meeting, or the trustees in town districts, may authorize the clerk to issue an order in favour of said treasurer to an amount not



exceeding two per cent. on all orders issued by the clerk and signed by the president and paid by said treasurer during the past school year.

■(6) The treasurer of each district shall execute a bond to the district in double the amount of money, as near as can be ascertained, which will come into his hands as treasurer during his term, with sufficient surety to be approved by the president and clerk, conditioned for the faithful discharge of his duties. Such bond shall be filed with the clerk of the district, and a duplicate copy with the signed approval of the president and clerk shall be filed with the Bureau of Education.

In case of breach of any condition of said bond, the president shall cause an action to be commenced thereon and prosecuted in the name of the district, and the money when collected shall be applied to the use of the district. The treasurer failing to give bond, as provided herein, or for any cause being unable to attend to his duty, the trustees of the district shall proceed to appoint another treasurer, who shall give bonds as required herein.

Two-thirds the voters of any district may petition the president and the clerk thereof to require of the treasurer new bonds under the terms of this section. On receiving such petition, the president and clerk shall forthwith make such requisition. If the treasurer neglects to furnish new bonds within ten days, his office may thereafter be declared vacant and be filled by appointment.

(7) The clerk shall record the proceedings of the district meetings and of the board of trustees in a book provided for that purpose ; he shall enter therein copies of his report made to the English Supervisor or to the Bureau of Education, and keep and preserve all records, books, and papers belonging to his office, and deliver the same to his successor in office ; he shall act as clerk of the district in all its meetings ; or, if absent, record the minutes of the clerk pro tempore ; his minutes shall show all disbursements authorized by the district meetings or by the trustees, and he shall keep an account of all expenses of the school and school house, and record the cost of out-buildings, fences and all the conveniences of the school room, such as charts, maps, blackboards and school libraries provided by the district. He shall issue vouchers for all amounts owed by the district as shown by the disbursements authorized in the minutes, when they become due, which vouchers when countersigned by the president shall become orders upon the treasurer of the district for their face value. Each voucher shall be dated and numbered, and shall state the service or consideration for which it was drawn, and the name of the parties rendering such service or consideration, and shall be recorded by the clerk in a book kept by him for that purpose.

(8) The clerk shall give at least thirty days' notice of each annual meeting or school election, and each meeting for the authorization of taxation or bonds, and ten days' notice of all other meetings or elections, by posting three notices thereof in conspicuous places in the district.

Every notice for a special meeting or election shall set forth the object for which such meeting or election is called. In barrio districts special meetings for any purpose authorized by this act, may be called on order of the trustees or by written request of any three voters of the district. Upon refusal of the clerk to call a meeting, or his neglect to do so for three days after receiving a written request from three voters, said three voters may call a legal meeting by posting written notices as indicated above. It is not necessary that the object of the annual meeting be specified in the notice calling it.

(9) Each district clerk shall, on or before the tenth of June of each year, make and transmit to the English Supervisor of his municipality or supervising district, a certified report, on a blank prepared by the Bureau of Education and furnished by said English Supervisor, showing the condition and value of school property, receipts from different sources, disbursements for different objects, and such other matters as the blanks may require.

■(10) The English Supervisor and the Alcalde in each Municipality shall meet in the Alcadia of said Municipality, upon some day in the third week,

in June, and shall examine the reports of clerks of school districts of the Municipality in order to ascertain respecting each report :

*a.* Whether the cash items are recorded in their proper places ; whether the financial statement balances ; and whether all questions in the report are correctly answered.

*b.* Whether the report was made within the time specified by law ; and in case of any report sent by mail, it shall be deemed made when deposited in a post office, properly stamped and addressed to the English Supervisor of the municipality or supervising district.

(11) Every clerk whose report is found to be accurate and made within the time prescribed by law, shall receive pay for such service at the rate of two per cent. on the cash disbursements of the year ; but the amount paid for this service shall not be more than twenty-five dollars.

In case errors of a minor character occur in a report, evidently unintentional, one half the compensation otherwise paid may be paid the clerk, but this only in case he corrects all such errors and returns the report corrected before the last week in June.

The English Supervisor immediately after the reports have been examined by himself and the Alcalde of the municipality, shall send a written notice to every clerk found to be entitled to pay, stating such fact. Such notice shall be a voucher on which the treasurer of the district shall pay the clerk the sum due for such service out of any funds applicable to current expenses and not needed for the payment of teachers holding orders against or under contract to the district.

#### VI.—DISTRICT TAXES.

(1) All taxes levied by a district for public school purposes shall be levied upon the real property of the district, and shall be assessed and collected by the same persons and in the same manner as municipal taxes, but the account of all such taxes shall be kept distinct from that of the municipal taxes, and from the accounts of other districts of the municipality, and the money may be spent only upon order of the district treasurer. In case the school taxes collected from any district do not amount to the sum required by the levy of the school meeting of the Board of Trustees, the municipal treasurer shall at once notify the district treasurer and the Bureau of Education of that fact, with full details of the persons defaulting in taxes and for what amount. District taxes shall have preference to municipal taxes, and in case of partial payment of taxes, said payment shall be applied to the district levy until it is satisfied, pending legal action for the collection of the remainder from the defaulting taxpayers.

(2) The clerk of each district shall, on or before the 15th of June of each year, furnish to the Alcalde of his Municipality an attested copy of so much of his district record as will show the amount of money voted to be raised by the district for school purposes at any annual or special meeting during the year, and any amount levied by trustees under power conferred by this act, without the vote of the district.

(3) It shall be the duty of the Alcalde to place on file the reports of the district clerks of his Municipality and to cause the amounts specified therein to be levied upon the taxable property of each respective district, and such taxes to be entered upon the assessment rolls as to indicate the special object for which each amount respectively is levied.

But municipal officers, in entering such tax, shall not be required to use as a rate per cent. any fractional part of a mill lower than one-fourth.

(4) The Secretary of Finance shall notify each municipal Alcalde, on the first of June of each year, or within three days subsequent to that date, of the tax necessary to be levied to pay principal and interest due upon district loans of each district of the Municipality, and it shall be the duty of the Alcalde to cause such tax to be entered with the other school tax of each district, in such manner as to have preference to all other items of said tax.

(5) No tax can be levied for public school purposes by any other authority other than that of the Insular Government or of the school district, nor can any district be bonded for school purposes in any other way than that authorized in this act ; and no part of the municipal tax, levied by the Municipality as distinct from the district, can be used for school purposes, except as specially provided in this act.

#### VII.—DISTRICT BONDS.

(1) A majority of the legal voters of any district, at a special meeting or a special election called for that purpose, may authorize an issue of district bonds. A special meeting or a special election to authorize an issue of bonds may be called at any time, not a legal holiday, by a majority of the trustees of the district ; but in town districts a majority of the municipal council must concur with the school trustees in the call for an election for this purpose, and their concurrence in said call shall be a legal approval by the Municipality in its corporate capacity of the issue in question. The resolution submitted to the voters shall specify :

- a. The amount of the issue.
- b. The time it is to run.
- c. The exact purpose for which the proceeds shall be used.

(2) Within three days of the passage of a resolution bonding a district, the trustees shall forward three attested copies of said resolution, with a statement of the vote thereupon, to the Governor General of the Island, to be submitted by him to the Secretary of Finance, the Secretary of Justice, and the Secretary of the Interior respectively.

(3) Within ten days of receiving a copy of the resolution from the Governor General, each Secretary shall render a written opinion upon the legality and advisability of said issue to the Governor General, and the latter will thereupon legalize the issue by announcement in the Official Gazette, or if he refuse to do so, communicate that fact to the clerk of the district.

(4) Within ten days of the publication of a notice legalizing any issue of district bonds, the Secretary of Justice shall forward to the clerk of the district engraved coupon bonds, as specified in the resolution of the district. Such bonds shall be in denominations of not less than one hundred and not more than one thousand dollars, coin of the United States, and shall be payable in five, ten or fifteen annual instalments of equal amount, and shall carry interest at seven per cent.

(5) Within ten days of receiving the bonds from the Secretary of Justice, the clerk of the district shall have the bonds, and each coupon of said bonds signed by the officers of the board of trustees, and in town districts also by the Alcalde of the Municipality, and shall return said bonds to the Secretary of Finance.

(6) Four times in each year and one month before the opening of the next bids for bonds, the Secretary of Justice shall cause to be published in the Official Gazette, and in one daily paper of the Capital and one daily paper of the city of New York, an advertisement calling for bids for all district bonds that are in his hands unsold, stating in such advertisement the amount, period, and purpose of each district issue. Previous to the publication of such advertisement, a registry of all the bonds to be sold shall be made in duplicate by the Bureau of Education and the Secretary of Finance, such copy containing a copy of the district resolution authorizing such bonds, a copy of the official announcement of the Governor General legalizing such bonds, and a list and description of the bonds by number, together with a certification by the Alcalde of the Municipality within which the district is situated, to the signatures upon the same.

(7) All bids for bonds shall be sealed, and shall be accompanied by a certified check for ten per cent. the face value of the bonds, to be forfeited if the bidder does not abide by the terms of his bid. All bids shall be opened

at the office of the Secretary of Finance, at a time specified in the advertisement of the bonds, and in the presence of the Secretary of Finance, the Secretary of Justice, the Secretary of the Interior, and the Director of Public Instruction, or the deputized representatives of each of these. The trustees of any district whose bonds are to be sold shall also be entitled to have a special representative present at the opening of the bids. Immediately after the opening of the bids, the Director of Public Instruction shall notify the clerk of each district at what premium, if any, the bonds of his district were sold, and the clerk shall enter this communication in his records.

(8) No bid for less than the face value of the bonds shall be accepted. Where bonds are taken at a premium, the amount of said premium upon the entire issue shall be deposited, when received from the purchaser of the bonds, in the insular treasury, to the credit of the district issuing; and this money shall be deducted from the tax levied upon the district for the payment of principal and interest upon the bonds in question. The face value of the bonds shall be deposited in the insular treasury, and may be drawn against directly by the district treasurer, in the same manner as specified for district orders upon the municipal treasury, except that the Secretary of Finance shall recognize no order not issued for the payment of debts incurred in carrying out the purpose specified in the resolution authorizing the bonds.

(9) District bond coupons shall be paid by the Secretary of Finance upon presentation when due, and said secretary shall draw directly upon the municipal treasury involved for the same amount, which sum the municipal treasurer is authorized to pay without an order from the district clerk. But the municipal treasurer shall within ten days of payment forward to the clerk of the district in question a full statement of the transaction, indicating by number the bonds and the coupons upon which payment was applied, and the district clerk shall enter the same in his records.

(10) District bonds may be authorized only for the following purposes :

- a. To purchase a site for a school house.
- b. To erect, complete, or furnish a school house.
- c. To pay an indebtedness already incurred in erecting or furnishing a school house.

To refund the district's indebtedness.

## VIII.

(1) Whenever it shall become necessary for a school district to acquire a site for a school house, or an addition to a school house site, and the same shall not be acquired by agreement with the owners thereof, the Board of Trustees of said district may prosecute proceedings for the condemnation of said site and its appraisal by right of eminent domain, following the law of the land in such procedure.

(2) All plans and designs for school houses, and for remodelling, adding to, or furnishing school houses, and the contracts for the execution of the same, shall be approved by the Bureau of Education before they have legal force. And the Bureau of Education shall furnish plans and estimates for school houses to school trustees upon application without charge. The Director of Public Instruction, or his deputy, may by a written order to that effect stop payment upon any contract for construction, repair or furnishing of a school house, until satisfied that the terms of said contract are being properly observed.

(3) Where a district provides but one school, said school shall be open to both sexes, and the school house shall be entirely separate, and upon different premises from the residence of the teacher of any other private family.

(4) It shall be the duty of the Board of Trustees to keep the school buildings of their district in proper sanitary condition, to provide proper out-houses for the pupils, and to bring action to remove any nuisance or un-

1. The purpose of this document is to provide information regarding the activities of the [redacted] in the [redacted] area. This information is being provided for your information and is not to be distributed outside of your office.

2. The [redacted] has been observed in the [redacted] area on several occasions. The activities of the [redacted] are being monitored closely by the [redacted] and the [redacted].

3. The [redacted] has been observed in the [redacted] area on several occasions. The activities of the [redacted] are being monitored closely by the [redacted] and the [redacted].

4. The [redacted] has been observed in the [redacted] area on several occasions. The activities of the [redacted] are being monitored closely by the [redacted] and the [redacted].

5. The [redacted] has been observed in the [redacted] area on several occasions. The activities of the [redacted] are being monitored closely by the [redacted] and the [redacted].

6. The [redacted] has been observed in the [redacted] area on several occasions. The activities of the [redacted] are being monitored closely by the [redacted] and the [redacted].

7. The [redacted] has been observed in the [redacted] area on several occasions. The activities of the [redacted] are being monitored closely by the [redacted] and the [redacted].

8. The [redacted] has been observed in the [redacted] area on several occasions. The activities of the [redacted] are being monitored closely by the [redacted] and the [redacted].

9. The [redacted] has been observed in the [redacted] area on several occasions. The activities of the [redacted] are being monitored closely by the [redacted] and the [redacted].

## PART TWO.

## LAWS GOVERNING PUBLIC INSTRUCTION.

## I.

**An Order Defining Public Schools and the Rights of Pupils.**

(1) All schools supported by public taxation, either local or Insular, shall be styled public schools, and admission to them shall be free and without charge to all persons between the ages of six and eighteen years who are residents of the Island. And it is forbidden any teacher to accept fees for instruction given in public schools during school hours.

(2) The teacher may suspend, and the board of education may permanently exclude, from public schools under their jurisdiction pupils of bad moral character, or who are insubordinate, or who possess or are exposed to infectious disease.

This order will go into effect July 1st, 1899.

## II.

**An Order Defining the School Year and Its Divisions.**

(1) The legal school day shall consist of two sessions of three hours each, from 8 a.m. to 11 a.m., and from 1.30 p.m. to 4.30 p.m., respectively.

(2) The school week shall consist of five school days.

(3) The school month shall consist of four school weeks.

(4) The school term shall consist of three school months

(5) The school year shall consist of three terms, to wit :

A winter term, beginning the twelfth Monday before Holy Week.

A spring term, beginning the Monday after Holy Week.

A fall term, beginning the twelfth Monday before Christmas Week.

(6) The only days of the school term during which it shall be legal for teachers to close school shall be Saturdays and Sundays and those legal holidays established by the Honorable Secretary of Justice in his order of April 11th, 1899, approved by General Henry.

This order will go into effect July 1st, 1899.

These holidays are the following :

New Year's Day.

Twenty-second of February [Washington's Birthday].

Good Friday.

Fourth of July [Declaration of Independence of the United States].

Christmas Day.

And the day named as the national thanksgiving day by the President of the United States.

## III.

**An Order Establishing a Graded System of Schools in Towns.**

On and after July 1st, 1899, the present classification of schools shall cease to exist, and a system of rural schools and graded schools substituted therefor, in accordance with the following provisions :

(1) All schools in barrios, villages and country districts, where it is not practicable for more than fifty pupils to attend at the same building, shall be denominated rural schools, and in such schools the Rural School Program, as authorized in the Teachers' Manual, shall be followed ; and such schools shall be opened to children of both sexes.

(2) Wherever the number of pupils exceeds fifty in any one building, and is less than one hundred, the teacher shall record the applications for admission in order as they are made, upon blanks furnished by the Bureau of Education for that purpose ; but no teacher shall admit more than fifty pupils to his school, and he shall admit them in order of application. But if any pupil admitted shall be absent for two sessions any week, except on account of illness, or illness in his family, such pupil shall lose his place



open the roll, and be placed at the head end if the list is insufficient at the applicant standing at the head of the list if the list is sufficient and remove the seat thus vacated in the same manner.

(3) When the number of applicants for admission to the school reaches one hundred, two teachers shall be employed and the school provided in the same building if possible. In such cases the primary grades shall be taught by one teacher and the grammar grades by the other and the same rules of recording applications for admission to the school and excluding irregular attendants shall be followed as in the case of the school. Similarly, additional teachers shall be employed until there is a separate teacher and a separate room for each grade provided for in the Teachers' Manual.

(4) In schools where there are four grades or more the principal teacher shall exercise supervising functions over all the grades of the school, teaching the highest room. His official title shall be Principal of the School, and his salary as provided in order number three of the School Law. The duties of the principal shall be those outlined in the Teachers' Manual.

(5) Wherever practicable the different grades of a school shall be located in the same building. School rooms provided by municipalities, whether for rural or graded schools, shall contain as a minimum one and one-half square metres of floor area for every pupil seated in the room.

#### IV.

#### *An Order Prescribing a Legal Course of Study for the Public Schools of Puerto Rico.*

(1) On and after the beginning of the fall term of 1899, the following course of study is authorized for the public schools of Puerto Rico, public school pupils are entitled to instruction in all the subjects herein named according to their grade and the provisions of this act, and teachers are forbidden to teach any study not herein authorized in public schools during legal school hours.

(2) Pupils will be graded so far as possible into six grades, each representing one year's work. In the first and second years two recitations a day are required in each major subject taught; in other years one recitation a day is required in each major subject. But in rural schools where there are pupils of all six grades, the two highest grades may be combined for recitation purposes.

(3) In rural schools each session shall be divided into nine twenty-minute periods, of which the last eight shall be devoted to major subjects. In town schools where the number of grades taught by a single teacher is not more than three, each session shall consist of six thirty-minute periods, of which four at least shall be devoted to major subjects.

(4) The major subjects taught in public schools shall be the following:

a. Spanish. During the first two years reading and writing only shall be taught. During the last four years two periods a week will be devoted to language work in Spanish and Spanish grammar. As soon as the pupil has mastered the first difficulties of reading, his work in this subject shall be so directed as to develop literary taste, and wherever possible complete or abridged literary masterpieces shall be read.

b. English reading shall begin in the second year, but in town schools chart work shall be begun in English in the first year whenever the teacher has less than three grades. During the last four years, English language lessons shall be taught two periods a week, where exact training in composition and the use of correct grammatical forms will be taught through practice. In the last three years two periods a week shall be devoted to United States History and Civil Government as major subjects. Class work in English must be entirely in that language after the second year.

c. **ARITHMETIC**—Number work during the first two years will be in Spanish and English. For commercial reasons and because of the simple vocabulary required, the Arithmetic of the last four years will be taught in English. The metric system will be used, the English tables being placed in the appendix of the text book for reference. The text book must contain a Spanish and English vocabulary.

d. **GEOGRAPHY**—Oral Geography may be taught as a minor subject during the first two years in graded schools where the teacher has not more than three grades under her charge. The text book will be used during the last four years. Geography shall be taught in Spanish.

(5) The minor subjects taught in public schools shall be the following :

a. **MUSIC**—Pupils will be required to learn the national airs by ear. Kindergarten motion songs will also be taught in lower grades. Where the teacher is competent to do so, or a supervisor of music is provided, note singing may be taught.

b. **DRAWING**—Where the teacher is competent to do so, or a supervisor of drawing is provided, drawing may be taught. Clay modelling and stick laying may be associated with drawing wherever practicable, to develop the pupil's sense of form.

c. **MANUAL TRAINING**—Where facilities are provided and the teachers' time allows, plain needle work sewing and cutting may be taught girls, or sloyd work may be taught pupils of both sexes. Oral lessons in agriculture will be taught as heretofore.

d. **WRITING AND SPELLING**—Ordinarily writing and spelling will be associated with the major subjects, reading and language work, in the two languages ; but where the teacher has not more than three grades, or the time is not otherwise occupied by the major subjects, these subjects may be taught at separate periods.

e. **HYGIENE**—This subject is required, and must be taught orally in all schools or from charts. In graded schools where teachers have not more than three grades, a text book may be used.

f. **MORALS**—Morals as distinct from secular or religious teaching may be taught orally in schools.

(6) The Bureau of Education, with the authority of the Secretary of the Interior, shall publish a Teachers' Manual for public schools of different grades, specifying in detail the subjects and the amount of each particular subject to be taught in the different years, and the methods, books, and programmes to be used in teaching the same ; and said Manual, when authorized as above provided and published, shall have the same legal force as the other provisions of this act.

## V.

An Order Determining the Legal Qualifications of Teachers in the Public Schools, the Secondary Schools, and the University of Puerto Rico.

On and after the beginning of the fall term of 1899, teachers in the public institutions of Puerto Rico must possess the following qualifications and the corresponding diplomas, issued by the Bureau of Education :

(1) Every professor, instructor, or teacher of any grade teaching in the University of Puerto Rico or any allied professional school except the School of Commerce, who receives a salary from the public funds, must possess, [a] a degree from a college or gymnasium of America or Europe or a diploma equivalent to such a degree, showing that he has completed satisfactorily a course of at least three years in subjects higher than the secondary school studies ; and [b] a degree as doctor or an equivalent degree from a university of America or Europe of standing, showing that he has completed a course of at least two years in the special subject in which he will give instruction.

(2) Every professor, instructor, or teacher of any grade in any secondary school of Puerto Rico [normal school or high school], except critic teachers,

and teachers of drawing, sloyd, manual training, or music, must possess the qualifications stated in clause [a] of the first paragraph of this act. Critic teachers in normal schools must be graduates of normal schools where model school work is done in connection with professional training, or graduates of pedagogical courses in a college or university of repute with experience in model school work.

(3) English supervisors must be graduates of a university, college or normal school, or a secondary school preparing for the best American universities ; and English must be their mother tongue.

(4) Principals of graded schools must be college or normal school graduates.

(5) Graded school teachers must be graduates of normal schools, or graduates of secondary schools preparing for the best American universities with at least one year's experience as a teacher.

(6) Rural school teachers must possess certificates granted by the Bureau of Education upon examination, in accordance with the regulations provided for by this act.

(7) Any teacher possessing qualification for teaching in schools of a higher grade may teach in a school of a lower grade.

(8) Certificates to teach shall be granted to candidates possessing the qualifications above provided, by the Bureau of Education, in accordance with the conditions herein established. Such certificates shall be valid for five years and may be reindorsed by the Director of Public Instruction at the end of any five year period for a term of equal length, if the holder can produce satisfactory evidence that he has been engaged in school work or has attended an institution of learning as a student since the previous endorsement of his certificate.

(9) All teachers not at present holding positions in Puerto Rico schools who shall hereafter be granted certificates to teach in any public institution of Puerto Rico shall present evidence of sufficient knowledge of Spanish and English to be able to teach in either of those languages.

(10) It shall be illegal for any public official to pay money from the public funds for service as a teacher to any person not holding the certificates required by this act, and any public official so doing shall be personally liable for the money so paid.

(11) On or before May 31st, 1899, the Bureau of Education shall publish a plan for granting diplomas conforming with the graduation established by this act, to teachers now employed in the public schools of Puerto Rico who hold legal titles under the Spanish law, and to English supervisors now holding appointments. The same Bureau shall also provide for examinations for certificates under section six of this act, and regulations for conducting the same ; and all such provisions shall become valid portions of this act when duly announced by the Secretary of the Interior.

## VI.

### An Order Determining Salaries and Payment of Teachers.

(1) English Supervisors and Graded School Principals, holding Principals' diplomas, shall receive seventy-five dollars [\$75] per month, for each month of actual service.

(2) Graded school teachers, teaching in schools of four grades and upwards in towns of more than five thousand inhabitants, shall receive fifty dollars [\$50] per month, for each month of actual service.

(3) Graded school teachers, teaching in schools of two grades and upwards in towns of five thousand inhabitants or less, shall receive forty dollars [\$40] per month, for each month of actual service.

(4) Teachers in country schools (rural and auxiliary schools) shall receive thirty dollars [\$30] per month, for each month of actual service.

(5) Salaries shall be payable at the close of each school month.

(6) The discount for the teachers' pension fund shall be deducted from salaries before payment.

This order will go into effect July 1st, 1899.

## VII.

### **An Order Providing Free Text Books for Public Schools.**

(1) All books and supplies owned by the municipalities and at present in use in the public schools shall be collected by the municipal school board of each municipality before July 1st, 1899, and stored in the Alcaidia or some equally suitable place, at the disposal of the Bureau of Education.

(2) The Bureau of Education shall purchase under bid and loan to public school pupils the text books necessary for school use, in accordance with rules and regulations authorized by the Secretary of the Interior upon the recommendation of the Director of Public Instruction.

The second part of this order will go into effect July 1st, 1899.

## VIII.

### **An Order Defining the Regulation of Municipalities to Public Schools.**

(1) Municipalities must provide rooms for public school purposes, and shall be required to provide separate residences for teachers. Wherever possible Municipalities shall provide public school buildings, constructed and furnished according to plans authorized by the Secretary of the Interior, suitable for graded schools. Where Municipalities provide such buildings, additional teachers sufficient for six grades will be furnished as needed.

(2) Municipalities must provide all supplies for schools excepting text books, maps, and flags, so far as is necessary for the proper conduct of the school. But the Bureau of Education may provide such supplies, and must provide them for municipal authorities at cost.

(3) The authority at present exercised by municipal school boards shall not be limited or abridged in any way, except so far as specifically stated in this and the accompanying orders. Municipalities may provide additional schools, or provide for the opening of schools during vacations, or in any other way increase their educational facilities from their public funds.

This order will go into effect July 1st, 1899.

## IX.

### **An Order Granting Additional Powers to Municipal School Boards in the Appointment of Teachers.**

On and after July 1st, 1899, teachers in public schools may be appointed by municipal school boards, in accordance with the following provisions :

(1) Municipal school boards may advertise vacancies in the schools under their jurisdiction in the Official Gazette at least ten days before electing teachers, with notification of the date and place of meeting.

(2) At the legal meeting so set, two-thirds of the board being present, the members present may by a majority vote elect legally qualified teachers for the following school term or school year. But if the teacher elected is a relative within the third degree of any member of the school board, a three-fourths vote of those present shall be necessary to elect.

(3) Immediately after the meeting, the clerk of the board shall notify the Director of Public Instruction, in writing of the name of the teacher elected, for his approval.

(4) When the Director of Public Instruction has fully approved and attested to the legal qualifications of the teacher elected, the officers of the board shall sign a written contract, upon blanks furnished by the Bureau of Education for that purpose, as party of the first part, with the teacher as party of the second part, engaging him to teach for the following school term or school year, as provided at the meeting of the board. Such contract shall be in duplicate, one copy to be retained and filed by the clerk of the board, the other to be delivered to the teacher.

(5) When a teacher, on account of illness or for any other reason of equal moment, is prevented from attending to his duties, the clerk shall

immediately notify the Director of Public Instruction of that fact, and said Director shall upon receipt of such notification appoint a legally qualified substitute to serve until the regular teacher can resume his duties or a successor is legally appointed by the municipal school board.

(6) The Director of Public Instruction may annul any contract between a school board and a teacher for cause, and if the board neglects to fill the vacancy may appoint a teacher for the remainder of the term or until a teacher is legally appointed by the board. The municipal school board may suspend a teacher from his functions for flagrant immorality or neglect, or for violating the school law, pending action by the Director of Public Instruction.

## X.

### An Order Establishing High Schools in Puerto Rico.

(1) Wherever municipalities petition for such a school, and provide not less than ten thousand dollars (\$10,000) for the erection and furnishing of a building and a site for the same, high schools with graded schools attached will be provided by the Insular Government, with courses preparing for any American college or university, with a course in manual training, and with a course for teachers.

(2) The building shall be planned, erected and furnished, the course of studies determined, and the teachers appointed by the Bureau of Education, acting under the authority of the Secretary of the Interior.

(3) All teachers employed in such schools shall be normal school or university graduates, familiar with American school methods, and the principals shall be competent to teach the subjects required for admission to an American college or university of rank, and shall demonstrate this fact either by presenting a diploma from such a college or university or by examination. But these requirements may be waived in case of specially qualified teachers in special subjects such as sloyd and mechanical drawing. Wherever Puerto Ricans possessing the above qualifications, and qualifications equal to those of other candidates, appear, they shall be preferred in making appointments.

(4) The Insular appropriations for a high school with graded school attached is \$5,000 per annum.

## XI.

### An Order Establishing a Normal School of Puerto Rico.

(1) Beginning with the fall term of 1899, or as soon thereafter as possible, a Normal School of Puerto Rico will be opened.

(2) The school will be located in some town of the Island, to be determined by the Secretary of the Interior, upon the town's making a satisfactory offer for the school.

(3) The Insular Government will provide a building for the school and for a model school for practice, teaching to be connected with it.

(4) The Normal School will provide, in addition to the professional courses for teachers, a course preparing students to enter the University of Puerto Rico or universities of highest standing in the United States.

(5) Teachers employed in the Normal School shall be familiar with American school methods and competent to place their departments upon an equality with those of any similar school of the States. Where native teachers possessing these qualifications apply, they shall be preferred in making appointments.

(6) The appointment of teachers for the Normal School, the regulations of courses of study and requirements for admission, and the executive administration of the school shall be under the direction of the Bureau of Education, acting with the authority of the Secretary of the Interior.

(7) Tuition shall be free in the Normal School for residents of Puerto Rico who are citizens of the United States.



XII.

An Order Authorizing the Organization of Professional Schools of the University of Puerto Rico.

(1) The Bureau of Education acting under the authority of the Secretary of the Interior, is authorized to organize a School of Pharmacy, a School of Commerce and such other professional schools as may be needed in this Island and for which properly qualified students may apply to be admitted, to be opened with the fall term of 1899, or so soon thereafter as possible.

(2) The Schools of the University shall be located at San Juan.

(3) Tuition shall be charged in professional schools.

XIII.

An Order Governing Finances and Accounts of the Bureau of Education.

(1) All financial accounts of the Bureau of Education, including those for teachers' salaries and for text books and school supplies, shall be kept in English, and in American money.

(2) One twelfth of the entire amount of the educational budget for the year shall be deposited with the Government's bankers or financial agents by the proper officials, to the credit of the Director of Public Instruction, on or before the twentieth day of each month ; and all payments from said budget shall be made upon order of the Director of Public Instruction.

(3) Within three days of the first of each month the Director of Public Instruction shall render a detailed account of all moneys received and paid by him during the past month, and of all balances on hand or indebtedness at the beginning and close of said month, in duplicate, to the Secretary of the Interior and to the Secretary of Finance ; and his report to the Secretary of the Interior shall be accompanied by receipts or vouchers for all payments.

(4) The Secretary of the Interior shall issue vouchers for the payment of all salaries from the educational budget, except those of teachers in the common schools, at the close of each month of service, and the Secretary of each municipal school board shall issue similar vouchers for the salaries of the teachers of his municipality at the close of each school month ; and such vouchers when presented by their lawful holders shall be legal orders upon the Director of Public Instruction for their face value.

This order shall take effect May 1st, 1899. The clause with reference to common school teachers, in section four of this order, shall take effect July 1st, 1899.

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APPENDIX III.

AN ACT ESTABLISHING A DEPARTMENT OF PUBLIC INSTRUCTION IN THE PHILIPPINE ISLANDS, AND APPROPRIATING FORTY THOUSAND DOLLARS (\$40,000) FOR THE ORGANISATION AND MAINTENANCE OF A NORMAL AND A TRADE SCHOOL IN MANILA, AND FIFTEEN THOUSAND DOLLARS (\$15,000) FOR THE ORGANISATION AND MAINTENANCE OF AN AGRICULTURAL SCHOOL IN THE ISLAND OF NEGROS FOR THE YEAR 1901.

*By authority of the President of the United States, be it enacted by the United States Philippine Commission, that :*

SECTION 1. A Department of Public Instruction for the Philippine Islands is hereby established, the central office of which shall be in the city of Manila. All primary instruction in the schools established or maintained under this act shall be free.



**SEC. 2.** All schools heretofore established in the Philippine Islands, under the auspices of the Military Government, are hereby declared to be in the Department of Public Instruction established by section one and are made subject to the control of the officers of this department.

**SEC. 3.** The chief officer of this department shall be denominated the General Superintendent of Public Instruction and shall be appointed by the Commission. His annual salary shall be six thousand dollars (\$6,000). He shall have the following powers and duties, to be exercised and discharged under the general supervision of the Military Governor:

(a) He shall establish schools in every pueblo in the Archipelago, where practicable, and shall reorganize those already established, where such reorganization is necessary.

(b) He shall appoint, in accordance with Act No. 25, enacted October 17, 1900, a City Superintendent of Schools for Manila, and Division Superintendents of Schools for other parts of the Archipelago, and the teachers and clerks authorized by law, and shall prescribe the duties of such teachers and clerks.

(c) He shall fix the salaries of the division superintendents and teachers within the limits established by law.

(d) He shall fix a curriculum for primary, secondary, and other public schools and shall decide in what towns secondary schools shall be established.

(e) He shall divide the Archipelago into School Divisions, not more than ten (10) in number, and shall fix the boundaries thereof, with power to change the same when necessary, but the city of Manila and its barrios shall constitute one of such school divisions.

(f) He shall prescribe the authority to be exercised by the Principal Teacher of each school over the other teachers, if any, and his duties in caring for the school house and school property.

(g) He shall prescribe plans for the construction of school houses to be built by the municipalities, the amount of land required in each case, and rules of hygiene which shall be observed in connection with the schools of the Archipelago.

(h) He shall make contracts for the purchase of school supplies authorized by law, and, whenever practicable, he shall invite bids by public advertisement and shall award the contract to the lowest responsible bidder.

(i) He shall have power to determine the towns in which English teachers, to be paid out of the Insular Treasury, shall teach. He may exercise this discretion in favour of those towns showing their loyalty to the United States by their peaceful condition, and in favor of those towns which shall construct and maintain suitable school houses by local taxation or contributions.

(j) In case of a vacancy in the office of a division superintendent or that of the Superintendent for Manila, he shall discharge all the duties of such position during the vacancy, or may make a temporary appointment to fill the same.

(k) He shall examine and pass upon all requisitions made for funds by division superintendents and forward them, with his recommendation, to the Chief Executive for submission to the Commission.

(l) On or before January first and July first of each year, he shall make a report of his administration for the previous six months to the Military Governor and to the Commission, and such special reports as may from time to time be called for by either. In the regular semi-annual reports, it shall be the duty of the Superintendent to recommend changes in the school law which he deems expedient.

(m) He shall exercise general supervision over the entire department, and shall prepare and promulgate rules for the examination and determination of the qualifications of applicants for positions of division superintendents and teachers, and for the guidance of the officers and teachers of

the department, adapted to carry out this law and not inconsistent with its provisions.

SEC. 4. There shall be a superior advisory board of education composed of the General Superintendent and four members to be appointed by the Commission. It shall be the duty of the Board to hold regular meetings once in two months, on a day to be fixed by resolution of the Board, and such special meetings as shall be called by the General Superintendent. The General Superintendent shall act as President of the Board. The chief clerk of the General Superintendent shall act as Secretary of the Board and keep minutes of its proceedings. It shall be the duty of the Board to assist the General Superintendent by advice and information concerning the educational needs and condition of the Islands; to make such investigations as the General Superintendent may desire and to make recommendations to the Commission from time to time as to needed amendments to the law. Each of the four members of the Board, appointed by virtue of this section, shall receive as compensation ten dollars for each regular or special meeting which he shall attend. Any member of the Board who is a non-resident of Manila shall be paid his actual and necessary expenses for travel from his residence to Manila and his return and hotel expenses. Requisitions for the amount required to pay such compensation and expenses shall be made by the General Superintendent. The terms of office of the members of such Board appointed under this section shall be for three years or until their successors are appointed and qualified.

SEC. 5. There shall be a City Superintendent of Schools in the city of Manila who shall receive an annual salary of three thousand dollars (\$3,000).

SEC. 6. In each school division established by the General Superintendent of Public Instruction, there shall be a Division Superintendent who shall receive an annual salary of not less than two thousand dollars (\$2,000), and not more than twenty-five hundred dollars (\$2,500).

SEC. 7. The actual expenses of the General Superintendent and the Division Superintendents while travelling or absent from their usual places of residence on official business shall be paid out of the Insular Treasury.

SEC. 8. Except where otherwise provided, provisions of this act describing the duties and powers of division superintendents shall apply to the City Superintendent for Manila.

SEC. 9. Each division superintendent shall, subject to rules prescribed by the General Superintendent, under section 3 (*m*), appoint the native school teachers to serve in the schools within his district and shall fix their salaries from year to year within the limits prescribed by law. He shall examine the school houses occupied for public instruction within his division with a view to determining their suitableness and hygienic condition. Should the school house in which any school is conducted appear to the Division Superintendent to be unsuitable and dangerous for the health of the children, and should no other school house be available, he shall have power, subject to the approval of the General Superintendent, to discontinue such school, and it shall be unlawful thereafter to use the school house thus condemned for public school purposes. He shall pass upon and accept or reject or modify the plans for any new school house, proposed by the local authorities to be erected, and for the proposed site thereof, and shall make report of his action thereon to the General Superintendent of Public Instruction. If the local authorities or the local school board shall be dissatisfied with the decision of the Division Superintendent as to the suitableness of the plans or site of the proposed school house, they may appeal to the General Superintendent, whose decision shall be final. He shall make careful investigations into the agricultural conditions existing in his division and shall make report thereon to the General Superintendent of Public Instruction, with a view to aiding the General Superintendent

in making recommendations as to the places and number of the agricultural schools hereafter to be established. He shall see to it by personal visits and by requiring reports from the principal teachers of each school that the curriculum for primary and secondary schools prescribed by the General Superintendent of Public Instruction is complied with. He shall make himself familiar with the supplies and text books needed in each school in his division, and shall make report of the same at as early a date as possible, in order that they may be contracted for and furnished by the General Superintendent. He shall appoint one-half of the local school board in each pueblo in his division, as provided in section 10. He shall have and maintain his residence and an office in one of the large towns in his division, from which all the pueblos in his district can be most conveniently reached.

SEC. 10. There shall be established in each municipality organized under any General Order of the Military Governor or under such municipal code as may be hereafter enacted, a local school board, consisting of four or six members, as the Division Superintendent may determine, in addition to the President or Alcalde of the Municipality, who shall be a member ex-officio. One half of the members, except the member ex-officio, shall be elected by the Municipal Council, and the remaining half shall be appointed by the Division Superintendent, and the term of office of all members holding by appointment or election, shall be two years and until their successors shall have been duly elected or appointed.

SEC. 11. The appointed or elected members of the local school board may, after due notice and hearing, be removed at any time by the Division Superintendent, subject to the approval of the General Superintendent of Public Instruction, who shall have power to suspend such members temporarily.

SEC. 12. It shall be the power and duty of the local school board :—

(a) To visit from time to time the schools of the pueblo and to report bi-monthly to the Division Superintendent their condition and the attendance of pupils ;

(b) To recommend sites and plans to the Municipal Council for school houses to be erected ;

(c) Where there are two or more schools in the pueblo, to adopt rules, subject to the supervision of the Division Superintendent, for assigning the pupils of the pueblo to the several schools ;

(d) To report annually to the Municipal Council the amount of money which should be raised for the current year by local taxation for school purposes ;

(e) To report, whenever it shall deem necessary, directly to the General Superintendent as to the condition of the schools of the pueblo and to make suggestions in respect thereto as may seem to it expedient.

SEC. 13. Every pueblo shall constitute a school district and it shall be the duty of the Municipal Council thereof to make as ample provision as possible by local taxation for the support of all the schools established within its jurisdiction. In exceptional cases, where the topography of the country or the difficulty of communication between parts of the same pueblo require it, the Division Superintendent may attach a part of one pueblo to the school district of another and shall, in such case, fix the amount which it will be just for the Municipal Council of the former to contribute to the annual school expense of the latter.

SEC. 14. The English language shall, as soon as practicable, be made the basis of all public school instruction, and soldiers may be detailed as instructors until such time as they may be replaced by trained teachers.

SEC. 15. Authority is hereby given to the General Superintendent of Public Instruction to obtain from the United States one thousand trained teachers at monthly salaries of not less than seventy-five dollars (\$75) and not more than one hundred and twenty-five dollars (\$125), the exact salary

of each teacher to be fixed by the General Superintendent of Public Instruction in accordance with the efficiency of the teacher in question and the importance of the position held. The necessary travelling expenses of such teachers from their places of residence to Manila shall be paid by the government.

SEC. 16. No teacher or other person shall teach or criticise the doctrines of any church, religious sect or denomination, or shall attempt to influence the pupils for or against any church or religious sect in any public school established under this act. If any teacher shall intentionally violate this section, he or she shall, after due hearing, be dismissed from the public service.

Provided, however, that it shall be lawful for the priest or minister of any church established in the pueblo where a public school is situated, either in person or by a designated teacher of religion, to teach religion for one half an hour three times a week in the school building to those public school pupils whose parents or guardians desire it and express their desire therefor in writing filed with the Principal Teacher of the school, to be forwarded to the Division Superintendent, who shall fix the hours and rooms for such teaching. But no public school teacher shall either conduct religious exercises or teach religion or act as a designated religious teacher in the school building under the foregoing authority, and no pupil shall be required by any public school teacher to attend and receive the religious instruction herein permitted. Should the opportunity thus given to teach religion be used by the priest, minister or religious teacher, for the purpose of arousing disloyalty to the United States, or of discouraging the attendance of pupils at such public school, or of creating a disturbance of public order, or of interfering with the discipline of the school, the Division Superintendent, subject to the approval of the General Superintendent of Public Instruction, may, after due investigation and hearing, forbid such offending priest, minister or religious teacher from entering the public school building thereafter.

SEC. 17. There shall be established and maintained in the city of Manila a Normal School for the education of natives of the islands in the science of teaching. The rules and plan for the organization and conduct of such school and the qualifications of pupils entering the same, shall be determined by the General Superintendent of Public Instruction.

SEC. 18. There shall be established and maintained in the city of Manila a Trade School for the instruction of natives of the islands in the useful trades. The powers and duties of the General Superintendent in respect to this school shall be the same as those provided in the section in respect to the Normal School.

SEC. 19. There shall be established and maintained a School of Agriculture in the island of Negros. The Superior Advisory School Board shall recommend to the Commission for final determination a proper site for such school. The powers and duties of the General Superintendent in respect to this school shall be the same as those provided in the section concerning the Normal School.

SEC. 20. The General Superintendent of Public Instruction is authorized and directed, under the supervision of the Military Governor, to procure the making of plans and estimates for the creation of such school buildings as he may deem necessary and practicable at the present time, including a building or buildings for the Normal School in Manila and a building or buildings for the Trade School directed to be established in sections 17 and 18 hereof. The estimated cost of such buildings and their proper equipment shall not exceed four hundred thousand dollars (\$400,000). Such plans and estimates shall be submitted to the Commission.

SEC. 21. The General Superintendent of Public Instruction is directed to prepare and submit to the Commission through the Military Governor

a statement showing the text books and other supplies which will be needed for the year 1901, the estimated cost of which shall not exceed the sum of two hundred and twenty thousand dollars (\$220,000).

SEC. 22. The sum of twenty-five thousand dollars (\$25,000) or so much thereof as may be necessary is hereby appropriated out of any funds in the Insular Treasury not otherwise appropriated for the organization and maintenance of the Normal School in Manila for the year 1901.

SEC. 23. The sum of fifteen thousand dollars (\$15,000), or so much thereof as may be necessary, is hereby appropriated out of any funds in the Insular Treasury not otherwise appropriated, for the organization and maintenance of the Trade School in Manila for the year 1901.

SEC. 24. The sum of fifteen thousand dollars (\$15,000), or so much thereof as may be necessary, is hereby appropriated, out of any funds in the Insular Treasury not otherwise appropriated, for the organization and maintenance of the School of Agriculture for the year 1901.

SEC. 25. Nothing in this act shall be construed in any way to forbid, impede or obstruct the establishment and maintenance of private schools.

SEC. 26. Whenever sums of money are mentioned in this act, they shall be understood to be money of the United States.

SEC. 27. This act shall take effect on its passage.

Enacted, January 21, 1901.

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## THE HOLIDAY COURSE FOR CUBAN TEACHERS AT HARVARD.\*

When, in the summer of 1900, the American Commissioner for Education in Cuba initiated the idea of a six weeks' vacation course for Cuban teachers at Harvard, the novelty of the project appealed to the American imagination, and more than sufficient funds were at once provided by subscription. Harvard promised free tuition and guaranteed a sum of 75,000 dollars, and the Government undertook to convey the thirteen hundred teachers of both sexes, who availed themselves of the invitation, in Government transports to the Continent and back again. Difficulties vanished before Mr. Frye's indomitable energy; not even the scruples of Cuban etiquette as to permitting young women to travel unchaperoned sufficed to appal him, and he cut the Gordian knot by inviting the chaperones, or some of them, to come too. The Harvard authorities were equally diligent to ensure the success of the scheme; Dr. Eliot, the president of the university, declared it to be "the most interesting thing he had ever undertaken," and expressed the belief that "nothing he had ever done in all his educational career had been of greater importance or promised more beneficent and far-reaching results." Harvard undergraduates gave up their rooms for the accommodation of the male teachers, arrangements were made to board the women teachers with families in the town, and the two large dining-halls of the university were made over for the meals of the men and women teachers respectively. A contingent of Radcliffe and Harvard students with a knowledge of Spanish undertook the English instruction.

The programme of studies drawn up by Dr. Eliot consisted of English lessons twice a day for all the teachers, in sections of thirty, each lesson lasting forty-five minutes or half an hour; of a course of eighteen lectures in physiography and geography, illustrated by excursions three afternoons a week; of a course of eighteen lectures on American history, and ten on the history of the Spanish colonies. Sloyd classes three times a week for the men, and kindergarten lectures for the women, completed the course, with three lectures on American schools, and two on

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\* Based on articles by Mr. Sylvester Baxter in the "Outlook," and Mr. Clapp in the "Educational Review," and notices in various papers and magazines.



"Imitation and allied processes in the young." English classes began at 8.30 in the morning, and were followed by lectures from 9.30 to 11.15. At 11.30 came the second English lesson, and the afternoons were devoted to Sloyd and kindergarten courses, to excursions in connection with the geographical course, and to visits to factories and other objects of interest in the neighbourhood.

The care with which the meeting was organised reaped its due meed of success. Nothing was forgotten; religious facilities, information bureau, medical attendance, interpreters, and Spanish programmes and guides were all provided, and even the pessimistic Mr. Roger Clapp has nothing but praise from this point of view: "The task of settling this enormous body of strangers in their new homes was accomplished with a facility and speed that were surprising. Not a piece of baggage was lost. From the point of view of the business manager the expedition was uncommonly successful. It ran like a well-ordered machine." Moreover, everyone seems to have enjoyed himself extremely, and the pleasant manners and Spanish courtesy of the guests created a generally favourable impression. Probably the friendly recollections carried back to inoculate Cuban society with pro-American sentiments will prove the chief result of the expedition, though the association of teachers of all social classes from all parts of the island may do something to reconcile the local and political jealousies which are such a bar to educational progress, and thus fulfil one of the objects with which the Commissioner organised the scheme.

In the face of much conflicting testimony the educational results of the course are somewhat difficult to estimate. The optimistic view is presented by Mr. Sylvester Baxter in the "Outlook" for August, 1900, while in the "Educational Review" for October Mr. Roger Clapp represents the pessimists.

Six weeks is a very short time in which to produce educational results, especially amidst the distractions of strange surroundings and American hospitality, eager to promote the visitors' enjoyment by a series of "lawn parties" and balls; and it is only fair to remember how much instruction loses its spontaneity and power to awaken and hold interest when it has to be imparted through an interpreter or read in a translation.

The physiography course proved attractive to the teachers, the subject being new to them; but, of all the lectures, the kindergarten course seems to have been most successful, and to have aroused real interest.

In the English classes the addiction of the most elderly teachers to the approved schoolboy methods of cheating, their tendency to criticise the pronunciation and methods of their instructors, and their lack of steady application, were very embarrassing, but

Nothing appears to have been accomplished when at the end of course teachers who had never written English before, and whose vocabulary on their arrival did not exceed fifty words, write such a letter as the following :

RESPECTABLE SIR,—The excursion to Nantasket, on last Saturday, was most charming of all to me, in as much as it reminds me something of my beloved country, the shores of Varadero, one of the prettiest places

so I was very much pleased to see the groups of beautiful American ladies who kindly asked us as a souvenir, to write our names on their handkerchiefs, which for my part I did with pleasure."

The next specimen is less significant of what one writer calls "improvements" :

DEAR TEACHER,—I am very glad for have had occasion to show my appreciation for your lessons which had advanced me very much. They are very agreeable to me and I will carry to Cuba a very lovely remembrance of you and your lessons.

I want to tell you also the pleasure that I have been in my stay in this country. I like very much the American people they are very attentive and I have a very good remember of all the cities I have visited.

"YOUR LOVELY PUPIL."

The question remains, how far the "lovely remember" will be anything more educationally stimulating than, to quote Mr. ... "a vague consciousness of having experienced great



## THE EDUCATION OF THE COLOURED RACE.

Among the American exhibits at Paris, in 1900, there was none more vivid and impressive than that which, in the Department of Social Economy, illustrated the life, the education, and the social position of the Negroes in the United States. In 1900, there were in the United States, 8,840,789 Negroes, the total population being 76,303,387.\* That is to say, about one out of every nine inhabitants of the country is a negro; but, of course, the black proportion is very much larger in the sixteen former Slave States and the District of Columbia than in other parts of the Union. The provision of a fitting education for this large coloured population is one of the most serious of American problems. Happily, in spite of some depressing features in the outlook, there are encouraging prospects of its satisfactory, though necessarily gradual, solution. These hopes are based on four main grounds: (1) the strong feeling of national unity, which has removed the old bitterness between North and South, and lessened in Southern minds the former antagonism towards the educational policy of the North; (2) the economic development of the "New South," with the resulting demand for that productive efficiency which a well-organised school-system can alone provide; (3) the steady development, among great numbers of the negro race, of the qualities which are the foundation of good and prosperous citizenship; and (4) the growth of the conviction that the education of the coloured people must be largely (though by no means narrowly) practical and industrial in its character. It is one aim of this paper to give a brief account of two institutions which have proved what moral and intellectual, as well as economic, benefits can be derived from such an education. These institutions are the Hampton Normal and Agricultural Institute, two miles from Old Point Comfort, in Virginia; and the Normal and Industrial Institute, at Tuskegee, in the State of Alabama. The Hampton Institute is close to the spot where, in 1620, the first negro slaves were landed in America. Its work will always be associated with the memory of one of the most heroic figures in the history of American education—General S. C. Armstrong. The work of Hampton has been the work of a pioneer. It has been inspired by a noble spirit of

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\* Total white population, 66,990,802 : total coloured, 9,312,585. The latter total was made up as follows: Negroes, 8,840,789; Indians, 266,760; Chinese, 119,050; Japanese, 85,986. In two States (Mississippi and South Carolina) the negroes outnumbered the whites, in each case by more than 200,000. [U.S.A. Census Bulletin No. 103. Oct. 10, 1901.]

missionary enthusiasm, self-denying patience, educational sagacity, and practical good sense—qualities not always found together, but, when in combination, almost irresistible. Hampton is slowly influencing the ideal of negro education throughout the South. One of its outgrowths is the similar institution at Tuskegee. The success at Tuskegee is in chief measure due to the undaunted energy and the good judgment of a former Hampton student, Mr. Booker Washington. He, like General Armstrong before him, is convinced that the future of the coloured race largely depends on their receiving an appropriate education—an education which is practical but ethically inspiring, firm but humane.

The history of education in the Southern British Provinces of North America during the Colonial period is one of singular interest to the English student. He sees in it a pathetic travesty of much that was best, but of much more that was worst, in the educational ideas dominant in his own country at the same time. Even now, the English traveller in Virginia meets with something that reminds him of the traces of Georgian England which remain at home. The gentry of the "Old Dominion" had among them considerable numbers of families who had brought from the mother-country the traditions, the excellencies, the prejudices, and the social outlook of the English country gentlemen of their time. Such a book as Francis Osborne's "Advice to a Son" might well have been written by a landowner in the earlier days of Virginian society. South Carolina, it has been said, was in some respects the most "English" of all the American Colonies. Out of 114 Americans admitted to the English Bar in the eighteenth century, 17 were from Virginia, but 44 came from South Carolina.\* Especially in these two provinces, but also elsewhere in the South, there was to be found among the upper classes that refined, cultivated, well-found and somewhat fastidious society which was also one of the great distinctions of English life. In both provinces, the influential families preferred the pursuits of the country to those of the town. They loved the land and country life. Thomas Jefferson himself felt that the spread of manufactures, and the growth of city populations, would be injurious to the welfare of the Republic. The traditional, though unformulated, belief of these "English country gentlemen beyond the seas" was that happiness is best to be found in a settled order of society; *i.e.*, as they thought, in an order graded in duties, and therefore rightly graded both in culture and in the authority which appertains to culture; undisturbed by demagogues and by false but exciting notions of political equality; dignified, unemotional, serene. The prevailing tone of these societies was unfavourable to the ideas of Presbyterianism on the one hand or of political democracy on the other. Their leaders preferred a middle way,

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\* Dr. A. D. Mayo.—"Public Schools during the Colonial and Revolutionary Period in the United States." (Report of U.S. Commissioner of Education, 1893-4, vol. i., p. 690.)

ill-defined in its course and in its limits, but (as they thought) a comfortable working compromise. In nearly all the Southern British Provinces of North America the civil power was legally or virtually united with the Church of England, though the actual working of that union was very far below the ideal which it represented, and to which indeed some think that it might have far more closely conformed, had not the British Government refused to allow Bishops to be consecrated for dioceses even in the Southern provinces of America.\* In Virginia and South Carolina, as well as in other of the Southern provinces, there was to be found a highly cultivated and refined society, polished and instructed according to the highest English standard of the day. South Carolina was characteristically English in the social tone of its upper classes; but Virginia, hardly less so, produced from among the same classes a far more splendid succession of great statesmen and men of affairs. Washington, Jefferson, and Madison were all Virginians. The ancestors of all of them are said to have been Royalists in Great Britain during the Puritan Revolution.†

But the English upper-class tradition of social duty and culture, though it had been reinvigorated in Virginia by the arrival of a number of well-born English families during the Protectorate, began to flag in its new surroundings. There were four chief reasons for this decline: (1) Every great social tradition is intimately connected with its familiar environment. It is really a web of impalpable influences—some ethical, some economic, some spiritual, but all in great measure unconscious. It is attached to local associations, and to old familiar places, and it derives renewal of its strength from roots which have struck deep into its native soil. Those who by their character and

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\*In the last years of Queen Anne's reign the establishment of four bishoprics in America was under serious consideration, but the influences of the following period were unfavourable to the design. This refusal to establish bishoprics in America seems to have been based on political grounds. The British Government feared the result of a collision between the ideals of Episcopacy and of Congregationalism in the Northern Provinces. Much, doubtless, might have been done by a great Anglican University in the South. But in the first half of the seventeenth century two plans for the establishment of a University in Virginia had broken down. The second of these (1624) had aimed at the foundation of a University to be called "*Academia Virginiensis et Oxoniensis*." But the idea received too little support. Better fortune attended the College of William and Mary, chartered in 1693. The man who really brought about the establishment of that College was the Rev. Dr. Blair, commissary of the Bishop of London for Virginia. He journeyed to England, and overcame immense difficulties before he could persuade the Sovereigns to charter and endow the new institution. To one high official who tried to block his efforts, Dr. Blair pleaded: "Virginians, too, have souls to save." The reply is said to have been: "D-mn their souls; let them make tobacco." Finally the English Government endowed the College with 20,000 acres of land, the proceeds of a tax of a penny a pound on all tobacco exported from Maryland and Virginia, and all fees or profits accruing from the office of Surveyor-General, which was to be controlled by the president and faculty of the College.

† Mayo, *op. cit.*, p. 680.





mind" about the fundamental questions concerning the relations of the individual soul to forms of ecclesiastical organisation and of the individual citizen to the sovereign authority of the State. She has resisted one-sided settlements, and, though too often satisfied with slipshod compromise between two conflicting ideals, has always in her best moments and through her noblest writers testified to her belief that true unity is to be found "in the union and harmony of two apparently opposite truths." New England, on the one hand, and Virginia on the other, represented in a more extreme and separate form those antagonistic ideals of life which in England found a common home, and where, perhaps, each gained by having constantly before it the lessons which the other taught. But (4) by far the deepest and saddest cause for the decline of the high social tradition in Virginia, and for its calamitous failure to develop a vigorous middle class and a right sense of the dignity of labour, was the institution of slavery. In 1648, there were in Virginia, out of a population of 15,000 people, but 300 African slaves. The number of "indentured" white persons, enjoying no public rights till their term of service had expired, was much larger. In 1670, the population was 40,000, comprising 6,000 indentured whites, and 2,000 negro slaves. In 1782, the negro slaves numbered 270,000, and formed nearly one-half of the total population of the State. This canker of slavery ate away the heart of Virginian life. Its malign power may be measured by the grace and beauty of that which it destroyed.

The social ideals, persistent though rarely formulated, of the Southern provinces of British North America naturally expressed themselves in an educational system, if indeed the word "system" can be justly applied to arrangements so purposely unsystematic. Some writers appear to have conceived those provinces, as others have conceived England of the same period, to have been devoid of educational provision. Such a view is not grounded on facts. It could, indeed, hardly have been suggested, had the writers considered how many eminent men of action and of letters received their training in England during the last third of the seventeenth and the whole of the eighteenth centuries; or, if they had borne in mind, that, in the course of the eighteenth century, there was educated in Virginia a group of statesmen who were destined to affect the whole course of American, and indirectly of European, history. Educational arrangements which helped to train abilities of that order deserve consideration, though they may not have conformed to the Puritan model as set up in New England, or to the elaborate machinery which is working with more or less efficiency nearly all over the civilised world to-day.

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Priestley, a tutor at the Dissenting Academy at Warrington, English education, as well as English science, owes a lasting debt. His "Remarks on a Code of Education" was by far the most striking protest against Governmental monopoly in educational ideals which appeared in English till John Stuart Mill's essay "On Liberty."

Briefly described, the educational theory of Virginia, and to some extent of England, two hundred and thirty years ago, was to give the best possible education to the *élite*, and to trouble very little about anybody else. The vast majority were sacrificed to the minority, and, at the cost of immense sacrifice of latent or undeveloped promise, a few conspicuous results were achieved. Had this practice of pulling up superfluous seedlings been applied without social discrimination or class favouritism, it is possible that the process, as in gardening, might have produced more excellent results. But it is a moot point whether a Government is morally justified in setting up an educational system expressly designed to produce superlative excellence in the few at the cost of the real, though different, claims of the vast majority of its citizens. In any case, the Virginian, and, in a measure, the English, practice broke down, because the *élite* to which they had regard was in each case (though this was far less true of England than of Virginia) too narrowly confined within artificial social limits.\*

In his *Civil Government in the United States considered with some reference to its Origins*,† Mr. Fiske contrasted the form which local government assumed in New England and in the Old Dominion:—"As the political life of New England was in a manner built up out of the political life of the towns, so the political life of Virginia was built up out of the political life of the counties. This was partly because the vast plantations (of the South) were not grouped about a compact village nucleus like the small farms of the North, and partly because there was not in Virginia that Puritan theory of a Church according to which each congregation is a self-governing democracy. . . In New England the local magistrates were almost always, with the exception of justices, chosen by the people; while in Virginia, though some of them were nominally appointed\* by the governor, yet in practice they generally contrived to appoint themselves:—in other words, the local boards practically filled their own vacancies and were self-perpetuating." We are familiar in English history with both of these forms of social development. With us the two tendencies have existed side by side, almost perpetually struggling for the mastery, but neither enjoying room for free growth. In New England and in Virginia we see the two ideals of social organisation developing themselves more freely and with less opposition.

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\* In England, a considerable proportion of the great divines and men of letters in the eighteenth century were of comparatively humble origin. Porson and Johnson, Butler and Warburton, are instances in point. The exclusive tendency in English education was always abated (1) by prevalent good feeling, (2) by the opportunities given by the endowed local grammar schools, (3) by the existence of the Dissenting Academies, and (4) by the fact that many noblemen and gentlemen took pleasure in sending as *sizar*s to the University poor boys of special promise, who were resident on or near their estates. But there were always forces at work in English education which, if unchecked, would have lessened the facilities for general literary training.

† Macmillan, 1890, pp. 61-67.

Each naturally developed its own ideal of education. Both New England and Virginia cared for politics. Each trained up the young generation for political life. At the Revolution they stood together and supported one another. But the strength of New England was different from the strength of Virginia. New England excelled in the political vigour of the masses of the people: Virginia in the consummate leadership of its chief families. New England had produced a vigorous democracy: Virginia had produced a few brilliant statesmen. With this difference the systems of education, prevailing respectively in New England and in Virginia, had had much to do.

The educational arrangements of Virginia and South Carolina were intended to be better at the top than at the bottom, and therefore it will not be out of keeping to begin to describe them from the top. (i) The only institution south of the Potomac that did work of University rank was William and Mary College, at Williamsburg, in those days the capital of the colony of Virginia. The College played a considerable part in the life of Virginia. The capital of the province was purposely fixed at its gates. The clergy held their meetings in the College buildings and, before the capitol was built, the House of Burgesses also assembled there. Thus the College was on the main stream of the public life of the provinces and it became the nursing-mother of Virginian statesmen. "Virginia," writes Dr. Adams, "is called the mother of presidents, but the College of William and Mary, the alma mater of statesmen, is only another name for Virginia."\* But, in spite of its endowments, the ability of its professors, and the dogged persistence of its first president, Dr. Blair, the college never gained the same hold on the intellectual and social life of the South as did Harvard and Yale on that of the North. This failure was not wholly due to the fact that the spirit of William and Mary College was British, for that, too, was in harmony with "the aristocratic ideals of the ruling class in the Old Dominion"; nor, again, was it due to the fact that "the president was always the Bishop's first man in the colony, and represented the primacy of the Established Church of Great Britain and Virginia," † for Virginia was nearly as loyal to Anglicanism as New England was to Calvinism. The real reasons for the comparative failure of William and Mary College seem to have been three in number: (1) The Southern provinces cared less for higher education than New England did; (2) New England meant to educate her own ministers of religion, while the Southern provinces were more in the habit of importing them from home; and (3) many of the best Southern families made a practice of sending their sons home to the mother-country to complete their education. Hence, William and Mary College was cut off from some of the best sources of supply, just as is the case with many a local grammar-school in England

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\* The College of William and Mary, 1887, p. 27.

† Mayo, *op. cit.*, p. 681.

through our habit of sending boys away as boarders to the great public-schools. (ii) To turn to the next grade in education, there were dotted about the Southern provinces little "seminaries," "academies" or grammar schools, some in connection with the Church, some endowed and governed by trustees, some controlled by societies, others under private management. Thomas Jefferson, for example, was at a remote private secondary school in Virginia for some years before he went to William and Mary College at 17. Thus, the provision of what we should now call secondary education was organised very much according to the traditional English fashion:—it was sporadic; frequently efficient but doubtless frequently inefficient; not under "direct popular control;" fairly well adjusted to the preferences of the parents concerned; but conforming to no publicly-appointed criterion of intellectual excellence; lacking in organisation; and in no necessary relation to the actual needs of the neighbourhoods which it served. The ideal of education was a private education at home. Family associations were carefully preserved. Great stress was laid on the importance of bringing up the children of good families in the habit of exercising power and control over others. The education was, in fact, very carefully adjusted to an ideal of life and of social intercourse.\* The girls, and many of the boys, were taught at home by tutors or governesses. Neighbouring families would sometimes join in forming a private class. In one or other of these ways, the education of the children of the upper classes was largely entrusted to clergymen, who, partly on account of their literary attainments, partly for other reasons, were encouraged to combine the teaching with the pastoral office. In many of the schools special provision appears to have been made for the teaching of a few "poor children." (iii) Below these secondary schools came the so-called "petty schools," but these provided for only a small part of the population, and were in no way comparable in efficiency or general accessibility to the "common-schools" of New England. Many, however, of the children of the upper classes seem to have received their early schooling at these village schools, which were often of so temporary and casual a character as to be known as "field schools." George Washington is said to have had no schooling beyond what he received, up to the age of thirteen, at a "field school" and at a private class held in a relation's house.† ‡

\* Cf. W. Baird on "Private Education in Virginia" in the *Educational Review*, April 1898.

† Mayo, *op. cit.*, p. 678.

‡ The "field-school" was a natural outcome of the conditions of colonial life in the Southern States. Some wandering pedagogue would arrive in a district where a number of families had growing boys and girls who needed schooling. If the parents thought that the newcomer could be trusted, they would choose a conveniently central site, build there a rough log school-house, and then send their children to this extemporised (but not necessarily inefficient) place of education. Such a school was under no sort of governmental inspection. It was under the parental eyes. The appliances were rough: the school-books (as in the old Irish schools) very



There were also, as was the case in England, intermittent efforts to establish "schools of industry"—i.e., schools which should give a practical instead of a literary training. But these seemed to have failed, partly because no adequate outlay was made on behalf of the scheme, partly because the schools were regarded as intended for the lower classes only, but chiefly because the promoters did not realise that industrial education in any true sense of the word means a great deal more than imparting to boys and girls mechanical dexterity in some industrial operation. The experience gained in England and in other countries during the period when the establishment of "schools of industry" was one of the fashionable panaceas for social difficulties, proves conclusively that industrial education which is to "educate for efficient and happy work" must comprise ethical and intellectual, as well as purely industrial, elements, and must not only train the fingers of the pupils, but touch their heart and their imagination and strengthen their character.

This system of education in Virginia, if system it can be called, came into existence before the slave problem had grown to perilous proportions. In order to a right understanding of it, it is necessary to conceive of the Southern Provinces of British North America as they would have been without the slave population at all, but with a lower class of *white* working men and women. The Company of Englishmen which purchased Sir Walter Raleigh's rights in Virginia included Richard Hooker's friend and pupil, Edwin Sandys, and Nicholas Ferrar. It was the earnest desire of some members of the Company to promote education in Virginia. In 1616 a collection was ordered to be made all over England for the building of a College in Virginia and £1,500 was raised by 1619. The College was to have comprised both a "seminary for the learning of English," and a school for the Indian children. Nicholas Ferrar bequeathed to the College £300, "to be paid when there shall be ten of the infidels' children placed in it." The original aim of the College was thus twofold—to provide for the higher education of the colonists

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makeshift and miscellaneous ; boys and girls learnt together ; and the schoolmaster might be either a drunken vagabond or some scholar who had seen better days, or a clever man with an irrepressible instinct for wandering, or an eccentric ne'er-do-well, or (as not unfrequently happened in more populous and cultivated neighbourhoods) a young student fresh from a Northern College, just beginning to earn his living after taking his degree. Andrew Jackson, James Polk, and Andrew Johnson all began life in this way. (Mayo, "Common Schools in the South, 1830-1860;" Report of U.S. Commissioner of Education, 1899-1900, vol. i., p. 431.) In other words, nearly everything depended on the personality and personal idiosyncrasies of the teacher. The power of giving intellectual stimulus does not depend on the possession of masses of knowledge (though knowledge, if under the control of the teacher, is a very precious part of his equipment), but on a certain freshness and vivid power in imparting knowledge. This freshness of interest, this infectious power of mind, and this keen delight in teaching, are gifts which are not necessarily combined with academic training or many-sided culture. Hence it is, that so many comparatively ignorant men have had such great educational influence.



and for "the training up of the children of the infidels in true religion, moral virtue, and civility." In 1619 the City of London supplied one hundred children to be sent out by the Company to Virginia. In 1620 the Company agreed that all these white children should be educated and brought up in some good trade or profession, so that they might gain their livelihood by the time they were 21 years old or by the time they had served their seven years' apprenticeship. Thus the educational aspirations of the new colony were threefold: missionary education for the natives, industrial education for the white apprentices, and private education for the children of the gentry. But in 1622 the overseer and others who had been sent out to settle the college land were killed in an Indian massacre. The plan for establishing a chief centre of elementary education in the colony was nipped in the bud, though the Company in London urged the colonists to take the College affairs into consideration, "not only as a public but as a sacred matter."\*

But it was the development of negro slavery that was the true cause of the break-down of the social system as originally conceived. The educational system of Virginia was in close relation to the social ideal which had originally underlain the life of the Old Dominion. This had rested, more or less unconsciously, on four principles, some of which proved at a later time to be profoundly repugnant to the minds of the more strenuous supporters of public education in the North. The four principles may be stated thus: (1) That "education" ought not to consist only, or chiefly, of book-work, but should aim at fitting the boys or girls for the particular duties conventionally or necessarily required in the grade of society in which they were born. In other words, that education should be deliberately planned as a discipline for society, and should be graded (like society) according to distinctions of class. It would also follow that the secondary education of girls should differ from that of boys. (2) That mere book-work ought to form a relatively small part of anyone's education, and the smallest of all in the training of the labouring classes; and that the religious life of the masses of people depended far less on their being able to read the Bible for themselves (though that was important) than on their being members of some great spiritual fellowship, and bearing part in its public worship and religious life. (3) That the State had no cause to take any particular care to develop a highly educated middle class; but that, on the contrary, a middle class so educated might easily prove socially restless and politically inconvenient. (4) That all, who could afford to do so, ought to pay for the education of their own children; that "free education" for every body would be bad policy as well as being a piece of public extravagance; that really great abilities would find their way to the top, and

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\* Dr. Elsie Clews' *Educational Legislation and Administration of the Colonial Governments*, 1899, p. 350.

would be strengthened by overcoming difficulties in obtaining education; that the universal and gratuitous provision of public education for all would ultimately involve either (a) inferior quality in what was provided or (b) a prodigious burden on the finances of the State; and that it was expedient for the Central Government, though it must do something for education, to do nothing that could be done by private effort or out of charitable endowments without the assistance of the State. Some of these principles were congenial to the parsimony which was habitually shown towards all educational undertakings in the South. Their general influence on the public mind was depressing to many who might otherwise have been willing to support a system of efficient public education. For the time being, things probably seemed to the superficial observer to be getting on sufficiently well without any serious effort being made to improve education; and therefore education was let alone. Meanwhile, as the slave population grew, and the poor white population declined in *morale* and efficiency, the difficulties in the way of establishing a sound system of primary education became more serious, and public opinion showed itself more and more hostile to any educational change which might endanger the existing social order. "Education," which was grudged to the "poor white," was regarded (with some reason) as still more unsuitable for the coloured race. Polished, accomplished, and dignified as were the best representatives of the aristocracy of Virginia, the upper strata of the social system were supported by no sufficiently solid basis in the form of an industrious and independent middle class, while below all were the fathomless depths of genial illiteracy. It has been truly said that the social system of the Southern States was a "blending of splendid virtues and fatal weaknesses."\*

The history of education in Virginia for more than two centuries was a record of missed opportunities. (1) In 1619, there was, as has been mentioned above, a strong movement in England, supported by Sir Edwin Sandys and Lord Southampton, to provide for public education in the colony: Ten thousand acres of land were set apart for the endowment of a college or higher secondary school, and, as a further part of the scheme, for an elementary school for Indian children. The King subscribed to the funds, and not only was the great estate occupied, but a master was sent out for the elementary school with a body of workmen to erect the buildings. The plan for the education of the Indian children was that from 7 to 12 they should be taught "reading and the principles of Christianity," and that industrial training in the practice of trades should follow from 12 to 21, with a view to their being

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\* For an account of the similar characteristics of education in South Carolina in pre-Revolutionary days, see Colyer Merewether's "History of Higher Education in South Carolina," 1889 (pp. 24, et seq.). Locke drafted the Constitution of South Carolina, but inserted no word about public education.

fitted to take their place in the new community. But the plan for a university needed far larger funds than were forthcoming, and the Indians were found as unwilling to allow their children to be educated by the newcomers, as the settlers were to accept responsibility from the Indian children. The plan came to a violent end through an Indian massacre in 1622. Two years later (1624) the plan for founding a centre of higher education in Virginia was revived. The new scheme was to found, on an island in the Susquehanna River, an "Academia Virginiensis et Oxoniensis." But the chief promoter of the plan died, and the scheme for a college thus came to nothing for a second time.\* In Virginia, educational plans, in their main features wise and far-seeing, were starved by lack of general and continued support. In 1660 the Virginians voted urgency for educational reform, but the times were untoward. (2) In 1690 came the bold and persevering enterprise of Dr. Blair, on behalf of the endowment of William and Mary College, the establishment of which institution was the belated outcome of a vote passed in the colonial assembly thirty years before. The College was a nursing-mother of Virginian statesmen, and yet never succeeded in making the impression on the intellectual life of the colony which its friends justifiably hoped, and which, but for the growing taint of slavery, it might well have made. In 1697, however, the charity of Robert Boyle provided, at William and Mary College, a department for the education of Indian youths.† ‡ (3) Nearly a hundred years later, Thomas Jefferson submitted an elaborate plan of educational organization to the Virginia legislature. The famous Virginian, who wrote the draft of the Declaration of Independence, returned in 1776 from the Continental Congress to serve as member of the legislature of his native State. He was in his thirty-fourth year when he thus devoted himself to the task of reconstructing the social fabric of Virginia. The colonial system of entail of property was swept away. Primogeniture was abolished. The union of Church and State was dissolved. In 1779, Jefferson submitted to the Virginian legislature a scheme for the provision of primary schools for white children in every district; for the selection

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\* Dr. H. B. Adams, "The College of William and Mary," 1887, p. 12.

† Mention should be made of the labours of the Society for Promoting Christian Knowledge on behalf of education in Virginia. Dr. Bray, the originator of the idea of the S.P.C.K., was for some years Commissary of the Bishop of London in Maryland. While there he formed the plan for the S.P.C.K., the S.P.G., and for the "Association for founding Clerical Libraries and supporting Negro Schools." (See Allen & McClure, *History of S.P.C.K.*, 1698-1898, pp. 15 and 225 ; et seq.)

‡ In 1878 the Hampton Institute in Virginia opened its doors to Indian pupils, the place chosen being singularly appropriate for the purpose, as it is the site of the Indian village of Kecoughtan, from which the Indians were driven by the white settlers in the early days of the colony. "Catalogue of the Normal and Agricultural Institute," 1900-1901, p. 17.

therefrom of the most promising boys of poor parentage, with a view to their receiving a (partly classical) secondary education in one of a number of new and conveniently-placed grammar schools; and, finally, for the further selection, from among scholars in secondary schools, of a smaller number deemed fit to receive gratuitous education at William and Mary College, which institution was to be expanded into a modern and well-equipped university, and, in Dr. Mayo's words, to be "unsectarian in religion, elective in its curriculum, teaching everything necessary for a gentleman to know." Attached to, and connected with, this measure of educational reform, was an amendment to the existing laws designed to secure the freedom of all negroes, born of slave parents after the passing of the Act, and to provide for their residence with their parents till the age of 21 (girls till 18), during which period they were to receive at the public expense a course of practical instruction similar to that now provided at Hampton and at Tuskegee. Finally, Jefferson's idea was that the negroes, thus practically educated, might be settled somewhere outside America as a "free and independent people under the protection of the United States Government," white immigrants being encouraged to supply the place thus to be left vacant in the industrial economy of the State.\* But the whole scheme met with bitter and successful opposition. Slave-holding had eaten too deep into Virginian society for its legislative abolition to be possible, even on Jefferson's plan.† The planter interest showed itself implacably hostile, and the middle-class indifferent, to Jefferson's educational programme. William and Mary College actively opposed the scheme. And it is said that there was a considerable religious element in the opposition to the new plan, as tending to weaken ecclesiastical influences over public education. All that was done was to pass a permissive Act allowing each county bench of magistrates to establish a system of schools supported by public taxation. As Jefferson at once pointed out, such a permissive scheme was doomed to failure from the moment of its inception. Thus, at the beginning of the Republican, as well as at the beginning of the Colonial, period, Virginia missed an opportunity which, if wisely seized and energetically followed up, might not only have led to the more prudent and profitable development of the immense resources of the State, but have retained for her that great position in the councils of the Commonwealth which she enjoyed during

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\* Mayo, *op. cit.*, p. 726, et seq.

*Cf.* also Adams, "The College of William and Mary," p. 37.

† Slavery in Virginia was more like "an aristocratic caste system" than in South Carolina or Georgia. Dr. Du Bois, in his *Suppression of the African Slave Trade to the United States of America, 1638-1870* (New York, Longmans, 1896, p. 12.), says, "the climate, the staple tobacco crop, and the society of Virginia, were favourable to a system of domestic slavery, but one which tended to develop into a patriarchal serfdom rather than into a slave-consuming, industrial hierarchy."

the Revolutionary period, and might even have averted from the nation not only the Civil War but a great part of the still pressing problem of negro education. Jefferson's educational plans were too revolutionary for Virginian taste. But it was a great misfortune that the chance was missed of establishing the educational system of the State on a more comprehensive basis.

In sharp and striking contrast to Virginian inertia regarding public education was the persistent educational effort of New England. The educational system of New England was very much what the English system would have become had Milton had his way. But both in New England and in Virginia education was unhesitatingly kept in close connection with the established religious belief. The schools in New England were so penetrated with the religious atmosphere which characterised the whole community that their work was only part of a much larger and more comprehensive discipline, moulding the principles and colouring the ideals of every citizen. But in the South there was no such intensity of religious life, and no real unity of sentiment on matters of daily conduct. Yet here, too, there was no pretence of religious toleration on modern lines, and consequently, in South Carolina and elsewhere, the Presbyterians and other Dissenters from the Established Church opposed any State organisation of education so long as the civil and ecclesiastical powers were united. Had there been as strong a feeling for education in Virginia as there was in New England, Virginian education would have been organised on some such lines as were in the mind of some of the Anglican leaders in the mother country. It is significant of the part which theological or ethical dissensions necessarily play in educational affairs that those colonies (for example, Maryland) which practised religious toleration on principle, were the most embarrassed in their strenuous attempts to set up a public system of public instruction.\* But the New England pattern of "common-school" has proved itself the best fitted to survive on American soil, and the most generally acceptable to the great communities which have grown up under the industrial and commercial conditions so distasteful to the former leaders of the South.

Throughout the period which elapsed between the Declaration of Independence and the Civil War, there were in the Southern States movements (generally foiled by the more powerful counteracting forces in Southern society), which clearly indicated the presence of a strong and growing body

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\* Cf. Eggleston, "Transit of Civilisation from the Old World to the New." I have used the word "ethical" as well as "theological," because some of the most fundamental issues at stake are not connected with theological doctrines so much as with ideals of private and public duty. The forms of theological controversy may change, but the ethical issues persist, and promise to be as fruitful of political and social dissension in the future as they have been in the past. Cf. President Hadley's address on "The Demands of the Twentieth Century," in his "Education of the American Citizen" (1901, pp. 2-4).



of opinion in sympathy with the ideal of the free publicly-managed Common School of the Northern States. Illustrations of these movements, some of which left an abiding mark on educational organisation in the South, will be found in Dr. Mayo's "Organisation and Development of the American Common School in the Atlantic and Central States of the South, 1830-1860," in the "Report of the U.S. Commissioner of Education, 1899-1900" (pp. 427-561). But as Dr. Wiley, at one time State Superintendent of Education in North Carolina, said:—

"The system of Common Schools, to be successful in the highest sense, implied a moral revolution; it imposed new duties on the entire mass of our population; it was based on new ideas which had to become thoroughly rooted in every mind; and it opposed and sought to remove old prejudices and old habits."

In other words, what was really going forward was a conflict between two social (and therefore educational) ideals. The "common school" ideal ultimately gained the victory (*i.e.*, after the civil war), but it conquered only a debased form of an ideal of education which at its best presupposes the existence of a graded society, based for its right working on duties, not on privileges. It still remains to be seen how far the "common school" will be able to meet the complex needs of the new industrial and agricultural society, which is only just beginning to develop its more difficult ethical and economic problems.

As slavery grew worse, it became "the general policy of the sixteen slave-holding States of the South to prohibit by fine, imprisonment, and whipping, the giving of instruction to blacks, mulattoes, or other descendants of African parentage, and this prohibition was extended in most of the slave States to "free persons of colour" as well as the slaves.\* But, in attempting to form a judgment on this (as it now seems to us cruel and wicked) policy, it is right to take into account some considerations which could be urged on the slave-owners' side. In so doing it is, of course, not my purpose to palliate, still less to defend, the selfishness, the brutality, and the narrow-mindedness which in some cases undoubtedly governed the action of the privileged classes. But the social conditions in some parts of the South, in spite of the central and awful evil of slavery, had some good sides as well as many bad ones. Almost the worst of systems can shelter, even if it does not produce, some touching and charitable types of character, and some relationships which are affectionate and beautiful. It must be remembered, therefore, that many slave-owners of high principle and broad outlook (and sympathetic approval of negro slavery was by no means confined to the Southern parts of the United States†), regarded

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\* Mr. Booker Washington's article on "The Education of the Negro," in Professor Murray Butler's "Education in the United States" (Albany, N.Y., J.B. Lyon Co., 1900, vol. ii., p. 901). For the history of slavery and the slave trade, 1820-1850, see Du Bois, *op. cit.* pp. 151, et seq.

† For example, Harvard College "through the opening scenes of the great struggle between freedom and slavery, was the champion of the



"education," in the New England sense of the word, as only too likely to disseminate unsettling ideas about individual freedom. The American Constitution was, as Professor Ashley has said, "a classical document of individualism." \* It had been drawn up under influences which were antagonistic to that ideal of corporate and social unity, based on a hierarchy of classes and on a gradation of services, which lay behind what had been best in the Southern view of national life, though that view had been perverted by the substitution of negro slavery for subordinate and temporarily-indentured white labour. Again, the Puritan theology emphasised individuality in religion, and attached comparatively small importance to external means of grace. And this powerful and impressive view of things had received new colour and significance in the sphere of politics and of social relationship from the penetrating influences of the French revolutionary doctrines, doctrines which, as they had been developed in English minds before they were caught up by French philosophers, found a ready welcome among many English-speaking people on both sides of the Atlantic. † This strong tendency of thought and aspiration naturally found one of its chief channels through the schools. Whether the school was influenced by the new ideas in the revolutionary and subversive form which they took in the writings of Rousseau, or in the more philanthropic and precautionary form which they took in the writings of Pestalozzi, it was through the school, and through "education," in the New England sense of the word, that the new and exciting doctrines would pour. But the far-seeing Southern planter, whose mind I am seeking to interpret, would feel at heart that these new notions (apart altogether from their possible effect on his personal economic interests) were likely to have mischievous results if crudely imparted to the negro-slaves. The latter he regarded as being intellectually children, as likely to be sensitive to all that was most superficial and unsettling in the ideas of individual liberty, but as lacking in that sobriety of

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slave-holder." (G. Birkbeck Hill, "Harvard College," by an Oxonian, p. 37.) At the Harvard Centennial Celebration of 1836, one toast was "Massachusetts and South Carolina; they stood by one another nobly in the darkest days of peril and adversity; may long years of mutual prosperity find them undivided." In 1848, Sumner, on a tour through Massachusetts, speaking in favour of the Free Soil Party, was hissed by the students in Cambridge. Longfellow, in 1851, went to hear Emerson speak on the Fugitive Slave Law in the Cambridge City Hall, and heard the young law students hiss and hoot the speaker. (*Ibid.* pp. 39, 41.) But of course there was no hesitation on the part of Harvard men when the issue between North and South became clearly defined.

\* "Surveys, Historic and Economic" (Longmans, 1900), p. 407. For an allusion to the great importance of the conflict between Puritan and what may, perhaps, be called Anglican ideals of life and government, in the development of the struggle for American Independence, see p. 333 of the same book.

† Cf. Borgeaud, "The Rise of Modern Democracy in Old and New England" (Sonnenschein, 1894), and Gooch, "History of English Democratic Ideas in the Seventeenth Century" (Cambridge University Press, 1898).

character which protected the Puritan New Englander from the worst results of the new infection. Hence, many a good Southerner would regretfully oppose the new "education" as untimely and as inappropriate to the needs of the negroes; and the more brutal, ignorant and selfish members of the slave-holding class were thus given an opportunity to influence the State legislatures, of which they did not fail to make full use.\*

As an example of this brutal denial of the means of education, it will be sufficient to quote the following law, passed by the State of Georgia in 1829:—

"If any slave, negro, or free person of colour or any white person shall teach any slave, negro or free person of colour, to read or write either written or printed characters, the said free person of colour or slave shall be punished by fine and whipping at the discretion of the Court; and if a white person so offend, he, she or they shall be punished with a fine not exceeding \$500 and imprisonment in the common jail, at the discretion of the Court."†

But in spite of the severity of the laws and of their enforcement, there was an unceasing effort made, by those who felt it their duty to defy the law, to provide instruction for the slaves and "free persons of colour."

"In nearly all the large cities of the Southern States," writes Mr. Booker Washington, "notably in Charleston, Savannah, and New Orleans, there were what was styled 'clandestine schools' where such instruction was given. Those who maintained them and those who patronised them were constantly watched, and often apprehended and 'beaten with many stripes,' but the good work went on in some sort until 1860, when the war, which was to be 'the beginning of the end' of the whole system of slavery, put a stop to all such effort for the time being. There is no more heroic chapter in history than that which deals with the persistence with which the slaves and 'free persons of colour' in the slave States sought and secured a measure of intellectual and religious instruction; for they were prohibited from preaching or receiving religious instruction, except by written permit, and when at least five 'white men of good reputation' were present at such gatherings."‡

Private schools for the education of the coloured race sprang up long before the war throughout the Middle and New England States, especially in Massachusetts, New York, and Pennsylvania. But opinion in the North was far from being uniformly favourable to the education of the negroes. So late as 1830 no negro might matriculate in any of the colleges or other schools of the Middle and New England States.§ In many quarters, the fear was felt that the provision of education for negroes from a distance would flood the North with a new accession of coloured population. About the year 1833 Miss Prudence Crandall, who

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\* The fear of servile insurrection had a great influence on Southern policy; see Du Bois, *op. cit.* "Toussaint L'Ouverture and the Influence of the Haytian Revolution."

† "Monographs on Education in the United States"—(Edited by Prof. Murray Butler)—vol. ii., p. 902. See also C. E. Jones, "Education in Georgia," 1889, p. 140, also laws of 1755 and 1770.

‡ Mr. Booker Washington's paper in "Monographs on American Education," quoted above, vol. ii., pp. 902-903.

§ "Monographs on Education in the United States," vol. ii. p. 906.

kept a "select school for young ladies" at Canterbury, Connecticut, received a young coloured girl as a pupil. The parents of the white pupils insisted on the new comer's dismissal. But Miss Crandall declined. The parents of the white pupils withdrew their daughters. Miss Crandall's reply was to open her school 'for young ladies and little misses of colour.' Local opinion in Canterbury was adverse to Miss Crandall's experiment, but the schoolmistress refused to be intimidated. Consequently, the Connecticut Legislature passed in 1838 the following law :—

"Whereas attempts have been made to establish literary institutions in this State for the instruction of coloured persons belonging to other States and countries, which would tend to the great increase of the coloured population of the State and therefore to the injury of the people ; therefore

"Be it enacted, etc., that no person shall set up or establish in this State any school, academy or other literary institution for the instruction or education of coloured persons who are not inhabitants of this State, for the purpose of attending or being taught or instructed in any such school, academy or institution, any coloured person who is not an inhabitant of any town in this State, without the consent in writing, first obtained, of a majority of the civil authority and also the select men of the town in which such school, academy or institution is situated. . . .

"And each and every person who shall knowingly do any act forbidden as aforesaid, or shall be aiding or assisting therein, shall for the first offence forfeit and pay to the Treasurer of this State a fine of \$100, and for the second offence \$200, and so double for every offence of which he or she shall be convicted." . . .

When the law was passed, Miss Crandall was arrested and thrown into gaol. Her friends bailed her out, and the case was tried three times in the Lower Courts and then in the Court of Appellate Jurisdiction (July, 1834). The Court of Appeal reserved its decision, and had not announced it before the repeal of the law in 1838. Such announcement was apparently unnecessary, as in the course of the year 1834 Miss Crandall's premises had been more than once so violently attacked, that, acting on the advice of her friends, she gave up the school.\*

A vivid idea of the intense longing felt by many coloured people in the days of slavery for some chance of school is conveyed by a passage in Mr. Booker Washington's autobiography, "Up from Slavery"† :—

"I had no schooling while I was a slave, though I remember on several occasions I went as far as the school-house door with one of my young mistresses to carry her books. The picture of several dozen boys and girls in the school-room engaged in study made a deep impression on me, and I had the feeling that to get into a school-house and study in that way would be about the same as getting into Paradise."

But let it not be thought that the system of slavery as it actually existed in the period immediately anterior to its abolition necessarily promoted either the best industrial training of the negroes, or still less that it fostered intellectual culture among the leisured whites. It largely destroyed among the white people the spirit of self-reliance and self-help, without

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\* Op. cit., pp. 904-5. † Fisher Unwin. 1901. p. 6.

which true culture, whether literary or practical, is impossible. Moreover, though the system undoubtedly afforded opportunity for having neatness and industrial efficiency throughout each estate, that opportunity was far from being always seized. Speaking of what he himself saw while yet a slave, Mr. Booker Washington says :—

“The slaves had little personal interest in the life of the plantation, and their ignorance prevented them from learning how to do things in the most improved and thorough manner. As a result of the system, fences were out of repair, gates were hanging half off the hinges, doors creaked, window-panes were out, plastering had fallen but was not replaced, weeds grew in the yard. As a rule, there was food for whites and blacks, but inside the house and on the dining-room table there was wanting that delicacy and refinement of touch which can make home the most convenient, comfortable, and attractive place in the world. Withal there was a waste of food and other materials, which was sad.” \*

On the other hand, in the Editorial notes of the *Southern Workman* (Hampton Institute) for October, 1901, it is stated that :—

“The instruction given to slaves on large plantations before the war produced ideal servants.”

And Mrs Langhorne, in a paper on “Domestic Service in the South,” read before the American Social Science Association in Washington, April, 1901, remarked that :—

“To the older matrons of the South, accustomed in youth to the well-trained and faithful servants whose families had lived for generations with generations of their owners’ families, where the interests of all seemed the same, where there were many ties binding on all, where reasonable discipline was enforced and authority acknowledged, and kindly relations the rule, the present status of domestics seems altogether intolerable.”

Evidently there was great variety of condition under the system of slavery. In some households, it showed an attractive side. In others, it was a horrible evil.

It was a wise and far-seeing decision on the part of the members of the Society of Friends, who served as Trustees of the bequest left by Richard Humphreys in 1837, to adopt the following resolution as embodying the true aim of negro education :—

“We believe that the most successful method of elevating the moral and intellectual character of the descendants of Africa, as well as of improving their social condition, is to extend to them the benefit of a good education, and to instruct them in the knowledge of some useful trade or business whereby they may be enabled to obtain a comfortable livelihood by their own industry ; and through these means to prepare them for fulfilling the various duties of domestic and social life, with reputation and fidelity, as good citizens and freemen.” †

\* “Up from Slavery,” p. 18.

† Quoted in “Monographs on Education in the United States,” vol. ii., p. 906. One of the earliest American protests against the slave-trade came from some German Friends at Germantown, Penn., in 1688. In 1754 the Friends made the purchase of slaves a matter of discipline. In 1758 the Yearly Meeting of Friends decided to “manifest disunion” with any professing Friends who should be concerned in importing, selling, or purchasing slaves. (Du Bois, p. 21.)

For many years before the outbreak of the Civil War numbers of persons in America were secretly engaged in helping fugitive slaves to escape to places in the Northern States and in Canada, where they might live secure from recapture by their former owners. Organised efforts were made to found colonies of these fugitive slaves in parts of Canada. One of the most important of these was the Dawn Settlement at Dresden. The latter sprang from a school called the British and American Institute, which was founded in 1842 by a convention of coloured persons. They had been called together to decide how a sum of about 1,500 dollars collected in England by a member of the Society of Friends (J. C. Fuller) should be spent. They decided to start "a manual labour school where children could be taught those elements of knowledge which are usually the occupations of a grammar-school; and where the boys could be taught in addition the practice of some mechanic art, and the girls could be instructed in those domestic arts which are the proper occupation and ornament of their sex." It appears that this idea was suggested to the Convention, possibly by a Friend. In 1852 the school was flourishing and had above sixty pupils. In 1855 it was in decline, apparently through the evils arising from a divided management.\*

After the war there was a splendid outburst of philanthropic effort from the North, with a view to remedying the educational destitution of the South. Congress established "a Bureau for the relief of freedmen and refugees." Within five years after the conclusion of the war, this Bureau could report that, partly by its financial aid but much more by help of its guidance and knowledge of the districts, 4,239 schools had been established, 9,307 teachers employed, and 247,333 pupils brought under instruction. In 1868, the average attendance was 89,396, but in 1870 it had risen to 91,398 or 79·75 per cent of the total number enrolled. The emancipated slaves themselves supported 1,324 schools, and owned 592 school-houses. The Freedmen's Bureau had furnished 654 buildings for school purposes.† During the five years which it was at work, the Bureau expended over £1,300,000, the greater part of this being devoted to educational purposes.

But the earliest effort in the direction of providing schools for the new freedmen was that of the American Missionary Association which, beginning its work at Fort Monroe, Hampton, and Norfolk before the close of the war, sent teachers far and wide through the South after the cessation of hostilities. Liberal donations were made in support of this and other agencies for educational work among the coloured people, by benevolent

\* A. B. Hart, "The Underground Railroad from Slavery to Freedom" (Macmillan, 1898, p. 206). For an account of the failure of Manual Labour Schools in South Carolina 1830-1840, see Colyer Merewether "History of Higher Education in Southern Carolina, with a sketch of the Free School System" (1889, U. S. Bureau of Education. Contributions to American Educational History, No. 4), p. 51.

† "Monographs on Education in the United States," vol. ii., p. 915.



persons throughout the Middle and Northern States. The fund which had most influence on education in the Southern States was the Peabody Fund of £400,000, given in 1867-9 by Mr. George Peabody, for

“The promotion and encouragement of intellectual, moral or industrial education of the young of the more destitute portions of the Southern and South-Western States of our Union.” \*

But the most valuable gift of all was the devotion of the volunteer teachers, whose unselfishness and self-sacrifice made a very deep impression on the coloured as well as on the white population—

“All over the South,” says Mr. Fortune, “I have found men engaged in trade occupations, whose intellect and character were shaped for the battle of life by the New England pioneers, who took up the work where their soldier brothers laid it down at the close of the war. But the influence of those teachers upon the character and the home-life of the thousands who are neither teaching, preaching, nor engaged in professional or commercial pursuits, but are devoted to the making of domestic comfort and happiness for their husbands and children, in properly training the future citizens of the Republic, was one of the most necessary and far-reaching that was exercised, and the one which to-day holds out the promise for the best results in the years to come.” †

Of the eagerness of the coloured people to get education, Mr. Booker Washington gives a vivid picture, based on what he himself felt and saw at the time:—

“Few people who were not right in the midst of the scenes can form any exact idea of the intense desire which the people of my race showed for an education. It was a whole race trying to go to school. Few were too young, and none too old, to make the attempt to learn. As fast as any kind of teachers could be secured, not only were day-schools filled, but night-schools as well. The great ambition of the older people was to try to learn to read the Bible before they died. With this end in view, men and women who were fifty or seventy-five years old would be found in the night-school. Sunday-schools were formed soon after freedom, but the principal book studied in the Sunday-school was the spelling-book. Day-school, night-school, Sunday-school were always crowded, and often many had to be turned away for want of room.” ‡

But, though the moral earnestness and self-denying enthusiasm of these volunteer Northern teachers were beyond praise and price, it is probable that some of them, looking back on their work from the standpoint of later experience, may have felt that it would have been better had a rather different ideal of “education” been aimed at in these early efforts to instruct the newly-freed coloured race—

“In the early years of the educational work of the Southern States, little stress was laid upon the industrial training of the people. Mental and moral and religious training were considered the all-important thing.” §

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\* Mr. Peabody, whose name is revered in London as in America, laid the foundation of his fortune in Georgetown and Baltimore between 1812 and 1837. He subsequently settled in London.

† In the *Southern Workman* (Hampton Institute, Va.), Jan., 189 quoted in “*Monographs on American Education*,” vol. ii., p. 916.

‡ “Up from Slavery,” pp. 29-30.

§ “*Monographs on Education in the United States*,” vol. ii., p. 925.



The effect of this is best described by an eye-witness, himself a member of the coloured race:—

“It could not have been expected that a people which had spent generations in slavery, and, before that, generations in the darkest heathenism, could at first form any proper conception of what an education meant. In every part of the South, during the Reconstruction period, schools, both day and night, were filled to overflowing with people of all ages and conditions, some being as far along in age as sixty or seventy years. This ambition to secure an education was most praiseworthy and encouraging. The idea, however, was too prevalent that, as soon as one secured a little education, in some unexplainable way he would be free from most of the hardships of the world, and, at any rate, could live without manual labour. There was a further feeling that a knowledge, however little, of the Greek and Latin languages would make one a very superior human being, something bordering almost on the supernatural. I remember well that the first coloured man whom I saw, who knew something about foreign languages, impressed me at the time as being a man of all others to be envied. Naturally, most of our people who received some little education became teachers or preachers. While among these two classes there were many capable, earnest, godly men and women, still a large proportion took up teaching or preaching as an easy way of making a living. Many became teachers who could do little more than write their names. I remember there came into our neighbourhood one of this class who was in search of a school to teach, and the question arose while he was there as to the shape of the earth and how he would teach the children concerning the subject. He explained his position in the matter by saying that he was prepared to teach that the earth was either flat or round, according to the preference of a majority of his patrons. The ministry was the profession that suffered most . . . on account of not only ignorant but, in many cases, immoral men, who claimed that they were ‘called to preach’. In the earlier days of freedom almost every coloured man who learned to read would receive ‘a call to preach’ within a few days after he began reading. . . . The chief ambition among a large proportion of the students was to get an education so that they would not have to work any longer with their hands. A story is told of a coloured man in Alabama who, one hot day in July, while he was at work in a cotton field, suddenly stopped and, looking toward the skies, said: ‘O Lawd, de cotton am so grassy, de work am so hard, and de sun am so hot dat I b’lieve dis darky am called to preach’. . . . In Washington, in 1878, the city was crowded with coloured people, many of whom had recently come from the South. A large proportion had been drawn to Washington because they felt they could lead a life of ease there. Others had secured minor Government positions. . . . I saw young coloured men, who were not earning more than four dollars a week, spend two dollars or more for a buggy on Sunday to ride up and down Pennsylvania Avenue in, in order that they might try to convince the world that they were worth thousands. . . . In Washington I saw girls whose mothers were earning their living by laundrying. . . . These girls entered the public schools, and remained there perhaps six or eight years. When the public-school course was finished, they wanted more costly dresses, more costly hats and shoes. In a word, while their wants had been increased, their ability to supply those wants had not been increased in the same degree. On the other hand, their six or eight years of book education had weaned them away from the occupation of their mothers. The result of this was, in too many cases, that the girls went to the bad. I often thought how much wiser it would have been to give these girls the same amount of mental training—and I favour any kind of training, whether in the languages or mathematics, that gives strength and culture to the mind—but, at the same time, to give them the most thorough training in the latest and best methods of laundrying and other kindred occupations.”†

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† Booker Washington, “Up from Slavery,” 1901, pp. 80-82, 88-91, 128.

Why, it may be asked, was this educational mistake so generally made? One simple reason was that a great number of the teachers, who nobly volunteered for this difficult task, just taught what they knew how to teach—namely, subjects chiefly literary in their character. To teach laundry-work, or cookery, or bricklaying, or upholstering, it is not sufficient to know how to wash clothes, or cook a dinner, or lay bricks, or stuff a chair. The teacher has not only to know how to do the thing, but also how to break up the process into its successive steps, and to impart a knowledge of each step, lucidly, patiently, and not only in its proper order, but in a way which is rightly adjusted to the mental development of the learner. Here is where the art comes in. It is a difficult art. Some people, of course, have a marked aptitude for it. The best way of learning the art is to live with those who are skilfully practising it. Nearly everybody needs long and careful training before he is competent to teach, in an educational manner, the science and the art of a practical calling. Industrial teachers cannot be extemporised. And the industrial teacher who makes it his chief aim to strengthen, through industrial training, the moral character of the pupil, is not yet an easy type of teacher to find.

But one reason why these Northern educators confined themselves as a rule to an almost exclusively literary type of instruction, lay deeper still. A great part of our modern elementary education sprang from the desire that every one should be able to read the Bible. Schooling was only one small segment of the much wider circle of influences really denoted by the word "education." Home life, parental discipline, services and sermons in church, the strong tradition of the community, the practical tasks of daily duty in door and out of door—these were an essential, and indeed the greater, part of the "education" of a child. But a school is such an interesting thing that it has a way of becoming too much an end in itself. There is a constant tendency to forget that the school depends on its setting for its real efficacy, and that we ought frequently to ask ourselves the question whether, in our choice of what shall be done in school, we are thinking enough of how much is going to be done by the home to supplement it. In great cities, where the home education is deprived of many of the valuable elements of varied training which are naturally found in a country home, schools have often to make it their deliberate policy to do what they can to fill up the gaps left by this neglect or decline in home training. Such a change, however, involves a corresponding change in the training of the teachers who are to carry it through. But, in this missionary effort to provide schooling for the newly-enfranchised coloured people, a great number of the teachers set out with a conventional idea of what "education" was; had never made themselves realise how much, in their New England *school*-system, it was taken for granted that the *home* life of the children would do to help forward the work of the school; and, having themselves been professionally prepared for a certain kind of school-teaching, did

not think whether that preparation had equipped them to give the kind of *practical* instruction which the coloured people would specially need. Moreover, there was mixed up with the whole of the philanthropic and revolutionary movement in elementary education,—a movement from which the New England schools had derived much of their power,—a persistent tendency to overrate the value, the dignity, and the necessity of book-learning. This tendency was a survival from an earlier tradition in education. It was really foreign to the spirit of the new movement. Rousseau was one of the prophets of the new educational movement, but he was under no illusions as to the educational value of book-learning. Pestalozzi was one of the pioneers of modern elementary education, but he made it one of his chief objects to protest against the tyranny of the printed page, and against a too literary conception of school-work. It will be remembered that Gertrude's children learnt their lessons along with, and partly through, practical work at home under their mother's eye. But, in spite of this protest, the literary tendency remained paramount. This was partly due to a reaction against the false and narrow industrialism of the schools of industry; partly, to the still unexhausted power of the educational tradition of the Renaissance and the Reformation, the latter being especially and naturally strong in missionary education; partly, to the practical difficulty of there being few teachers competent to give any other than a literary education; partly, to the fact that no kind of "education" is so cheap as that which is merely given out of books; partly, in the left wing of the educational movement, to a keen desire that the masses of the people should have access to "knowledge," which would (it was thought) "strike off from their limbs the chains of political servitude," the power of perusing such books as Tom Paine's "Rights of Man" being highly esteemed by some of the leaders of one branch of the educational movement; partly, in the last place, to the fact that many of the working men who were keenest about educational progress were themselves great readers, and jumped to the conclusion that everybody else would always want to read as much as they did. Those philanthropists who took an active interest in educational and social movements saw a great deal of workmen of this type, and were apt to assume that, instead of being exceptional, they were representative of their class. Mr. Henry Wilson has recently referred to this error, with a touch of humorous exaggeration—

"Lord Brougham, Sir Thomas Wyse, my own father, and other early advocates of education, said it was only want of opportunity that prevented every working-man from spending all his leisure in reading Shelley." \*

Such were the chief causes of the misdirection in educational aim which characterised so much, though happily not all, of the Northern enthusiasm for giving instruction to the coloured race. Yet even where that aim was most misdirected so far as subjects

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\* *Times*, October 22nd, 1901.

of instruction were concerned, the moral earnestness and unselfish devotion of the teachers were not thrown away. They left an indelible mark on the situation. But, had it been accompanied by a well-thought-out plan of industrial education, the good done might have been incalculably greater. Some have asked whether the Federal Government ought not to have made a more comprehensive effort for the education of the coloured race before entrusting them with the full rights of citizenship. This point of view is well represented by Mr. Booker Washington:—

“ Even as a youth, and later in manhood, I had the feeling that it was cruelly wrong in the Central Government, at the beginning of our freedom, to fail to make some provision for the general education of our people in addition to what the States might do, so that the people would be the better prepared for the duties of citizenship. It is easy to find fault, to remark what might have been done, and perhaps after all, and under all the circumstances, those in charge of the conduct of affairs did the only thing that could be done at the time. Still, as I look back now over the entire period of our freedom, I cannot help feeling that it would have been wiser if some plan could have been put in operation which would have made the possession of a certain amount of education or property, or both, a test for the exercise of the franchise, and a way provided by which this test should be made to apply honestly and squarely to both the white and the black races.” \*

However, it must be remembered that there was a strong tendency in one school of political philosophy, which dated from before the French Revolution, to ignore the existence of the great psychological differences between different types of men, and to assume for many practical, and even for educational, purposes that one man is pretty much on the same level as every other. The whole weight of this theory and of its implications would have been against the enforcement of the discrimination involved in any such scheme as Mr. Washington suggests. And, even had the Federal Government undertaken the task of providing education for the coloured race on a far vaster scale than that permitted by the resources of the Freedmen's Bureau, would not the education so provided have almost inevitably been of the conventional literary type? Nor must it be forgotten, that the coloured population evinced an extraordinary enthusiasm for literary education, and that this is, to some extent, a sign of the sort of education which, for certain purposes and under certain conditions, they need. One who has attended service in a coloured church in the black quarter of a city in one of the Southern States can never forget the pathetic force and religious feeling of the preacher's words, though his choice of them seemed to English ears too lavish and bizarre. There is a natural eloquence and an emotional power in many of the coloured people which craves for, and will in the end repay, the best literary culture. But that culture must be searching and austere, fitted for the few rather than for the many; and, even to the few not given alone, but as part of a wider discipline which, while it touches the heart and trains the tongue, shall also exercise the bodily powers, deepen the sense

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\* “ Up from Slavery,” pp. 83-84.

of responsibility, and fortify the moral character by forming good and healthy habits of life.

Happily, among the educational missionaries from the North who came to enlighten the intellectual darkness of the freedmen of the South, there was at least one man who saw clearly what the task involved, and what kind of training the coloured race required. This was Samuel Chapman Armstrong. He was the son of a missionary in Hawaii, but had been educated in the United States. He commanded a regiment of black soldiers in the Civil War. His whole after-life was consecrated to the work of building up a new and truer civilisation in the South. He believed that one great factor in that process must be education. But not education of the mere "three R's' type." He wrote:—

"What the negro needs most, and what he needs at once, is an elementary and industrial education. The race will succeed or fail as it shall devote itself with energy to agriculture and the mechanic arts, or avoid those pursuits ; and its teachers ought to be men inspired with the spirit of hard work, and acquainted with the ways that lead to material success. Power, character, manhood, is the ultimate end of education, of experience and of life."

Again:—

"The negro is more successful in getting knowledge than in using it. To him, as to all, knowledge comes easily, but wisdom slowly. He has more genius than gumption. Knowledge is power only as it is digested, assimilated. His mental digestion is weak."

Therefore, in 1868, he founded the Hampton Normal and Agricultural Institute, at Hampton, in Virginia, for the better training of members of the coloured race. He thus defined its aim:—

"To train . . . selected youths who shall go out and teach and lead their people, first by example by getting land and homes ; to give them not a dollar that they can earn for themselves ; to teach respect for labour ; to replace stupid drudgery with skilled hands ; and, to these ends, to build up an industrial system for the sake not only of self-support and intelligent labour, but also for the sake of character."

Above all, the work must have a social aim. It must seek, he urged, to build up among the coloured people a new ideal of clean, healthy, pure home-life. Home-life, as the focus of work, love and duty, he regarded as "the point of departure of civilisation."

But the new work was not to provide industrial training alone. It was to be no mere revival of the benevolently patronising idea, which had had too large a place in the plans of those who, in former generations, had started schools of industry for the labouring poor. Nor, on the other hand, was it to provide the opposite evil—the flashy, superficial, bookish instruction of the type which was only too attractive to the coloured race. Nor yet again was it to be nothing more than a skilful blend of these two elements of literary and industrial training, imparted merely with a view to increased industrial productiveness and (in the narrower sense of the words) economic well-being. General Armstrong's greatness lay in his fusing together two separate and apparently conflicting ideals of primary education—the literary ideal and the industrial ideal. He wove



together the threads of two traditions into one cord. But the power through which he did this work was a moral power. He conquered because he had faith in the future of the coloured people:—

“The negro boy,” writes one of his race, “has obstacles, discouragements, and temptations to battle with, that are little known to those not situated as he is. When a white boy undertakes a task, it is taken for granted that he will succeed. On the other hand, people are usually surprised if the negro boy does not fail. In a word, the negro youth starts out with the presumption against him.”\*

General Armstrong loved the coloured people. His sympathy gave him insight into their weakness as well as confidence in their strength. He knew that they needed discipline, right surroundings, an atmosphere of hard work for the sake of duty, training in the bearing of responsibility, protection against the temptations of a shallow sort of politics, a new sense of the dignity of labour, the stimulus of noble example, austere restraint of the emotions, exact training in verbal expression, the morally-uplifting sense of being able honestly to earn a good and respectable living by the practice of a useful trade; but, above all, leaders whom they could love and trust and admire, and the *esprit de corps* which comes from membership of a great institution devoted to other than self-regarding ends:—

“It has been my fortune,” writes one who has become the most famous of his pupils, “to meet personally many of what are called great characters both in Europe and America, but I do not hesitate to say that I never met any man who, in my estimation, was the equal of General Armstrong. One might have removed from Hampton all the buildings, class-rooms, teachers, and industries, and given the men and women there the opportunity of coming into daily contact with General Armstrong, and that alone would have been a liberal education. I never saw a man who so completely lost sight of himself. I do not believe he ever had a selfish thought. Although he fought against the Southern white man in the Civil War, I never heard him utter a bitter word against him afterwards. On the other hand, he was constantly seeking to find ways by which he could be of service to the Southern whites. The older I grow, the more I am convinced that there is no education which one can get from books and costly apparatus that is equal to that which can be gotten from contact with great men and women.”†

One is reminded of the touching words in which Dean Stanley, himself growing old, recalled to the Rugby boys of a later generation the memory of his great head-master.

The recently-published autobiography of Mr. Booker Washington enables us to form a good idea of the effect of General Armstrong's work on a receptive and energetic pupil. While still a boy (he was about twelve years of age at the time), the writer of “Up from Slavery” happened to overhear, in the darkness of the mine where he was working, two miners talking about a great school for coloured people in Virginia. The lad crept closer to them, and listened to a description of the Hampton Institute. “Not even Heaven,” he says, “presented more attractions to me than did the Hampton Normal and Agricultural Institute about which these men were talking. I

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\* “Up from Slavery,” p. 36. † Ibid., pp. 55-56.



resolved at once to go to the school, although I had no idea where it was, or how many miles away, or how I was going to reach it. I remembered only that I was on fire constantly with one ambition, and that was to go to Hampton. The thought was with me day and night." But his wish was not to be fulfilled immediately. There followed about eighteen months of domestic service under a very strict but kind-hearted lady from Vermont. This lady had the reputation of being a very severe mistress. But Washington soon began to understand her. "She wanted everything kept clean about her, she wanted things done promptly and systematically, and at the bottom of everything she wanted absolute honesty and frankness. Nothing must be sloven or shipshod; every door, every fence, must be in repair." But when the boy's duty was done, he was in every way encouraged by his mistress to get on with his book-learning. This lady was, indeed, a benefactress to the lad:—

"The lessons that I learned in the home of Mrs. Ruffner were as valuable to me as any education I have ever gotten anywhere since. Even to this day I never see bits of paper scattered around a house or in the street that I do not want to pick them up at once. I never see a filthy yard that I do not want to clean it, a paling off of a fence that I do not want to put it on, an unpainted or unwhitewashed house that I do not want to paint or whitewash it."

In the autumn of 1872, being then about fourteen, the boy made his way, with extreme difficulty and after suffering much privation but always with indomitable persistence, five hundred miles to Hampton. The story of his reception at "the large, three-storey brick school building," is very characteristic of the hard sense of those in charge of the institution. The boy had been long without proper food, and was travel-stained and shabby when he presented himself to the head teacher, Miss Mackie, and begged for admission. His appearance produced an unfavourable impression. Miss Mackie kept him for some hours in suspense, while she was admitting other students. But the lad lingered on. At last, Miss Mackie said to him: "The adjoining recitation-room needs sweeping. Take the broom and sweep it." Washington saw his chance. He had learnt at Mrs. Ruffner's what good sweeping meant:—

"I swept the recitation room three times. Then I got a dusting cloth and I dusted it four times. All the woodwork around the walls, every bench, table and desk, I went over four times with my dusting brush. Besides, every piece of furniture had been moved, and every closet and corner in the room had been thoroughly cleaned. When I was through, I reported to the head teacher. She was a 'Yankee' woman who knew just where to look for dirt. She went into the room and inspected the floors and closets, then she took her handkerchief and rubbed it on the woodwork about the walls, and over the table and benches. When she was unable to find one bit of dirt on the floor, or a particle of dust on any of the furniture, she quietly remarked, 'I guess you will do to enter this institution.'"

Washington became janitor, and so was able by his earnings to work out nearly the whole cost of his board:—

"The work was hard and taxing, but I stuck to it. I had to work late into the night, while at the same time I had to rise by four in the morning in order to build my fires and have a little time in which to prepare my lessons."

The boy had "grit," and the head teacher knew and valued him for it:—

"In all my career at Hampton, and ever since I have been out in the world, Miss Mary F. Mackie proved one of my strongest and most helpful friends. Her advice and encouragement were always helpful and strengthening to me in the darkest hour."

The Hampton Institute to-day consists of fifty-five buildings on an estate of 185 acres—the site of one of the military hospitals in the Civil War. Opened in 1868, with two teachers and 15 students, it was chartered in 1870 by a special Act of the Assembly of Virginia, but it is not a Government or State school. It is a private corporation, controlled by a body of seventeen trustees representing different denominations, no one of which has a majority. The buildings include accommodation for the boarders, school premises, a library, a memorial church, hospital, gymnasium, a well-equipped trade school, a large building for training in domestic science and in agriculture, a saw and planing mill, and various workshops. The trade department includes courses in carpentry, cabinet-making, brick-laying, plastering, painting, wheelwright's work, blacksmith's work, machine-work, steam-engineering, tailoring, shoe and harness making, tinsmithing, and printing. The printing office does job work for all the district round, including that for the large hotels at Old Point Comfort. Last year the shoe department made 385 pairs of shoes; the machine department, besides much other work, did considerable jobs for the Hampton Electric Power and Lighting Company; the wood-working machine shop built and sold 727 trucks; the tailoring department made 302 uniforms; and the brick-laying department, besides laying 450,000 bricks in the erection of a new College building, built a tall chimney at the mill, and did all brick-laying and plastering repairs in the College grounds.

"Just as far as possible," the Principal (Rev. Dr. Frissell) writes in his annual report for 1901,\* "Hampton is made a miniature world, where the young people learn to deal with problems similar to those that they will meet later in the outside world. In all the trades, instruction is made the prominent feature, and only so much of productive industry is allowed as will help the students to gain a practical knowledge of their trades."

Great stress is laid on teaching handiness in repairing, and the young men are given an insight into more than one trade, so that they may be good "all-round" men. For example, the class which had been working for a year at carpentry, took for half a year one half-day a week each at brick-laying, painting and tinsmithing, four hours a week at wood turning, and six hours a week at designing small houses and estimating the material for them.

Manual training is taken throughout the school:—

"No boy graduates from Hampton without having worked in wood, iron and sheet metal, besides having taken a course in agriculture. No girl graduates from the school without having received instruction in wood

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\* This report, and other papers about the Hampton Institute and corresponding publications from Tuskegee, can be seen at the Board of Education Library, St. Stephen's House, Cannon Row, S.W.

work, enabling her to mend and make simple furniture, or without having been taught to cook and serve a meal, and to make her own dresses and underclothing. She is also given a fair knowledge of plant and animal life."

Last year 454 pupils received instruction in agriculture at the Hampton Institute. Special stress is laid on dairying, gardening, and the care of poultry and other stock. Mr. Washington says in his autobiography that he learned a valuable lesson at Hampton "by coming into contact with the best breeds of live stock and fowls." There is a small farm of four acres with a barn and silo, managed by a student, to show how a family can be supported on a small piece of ground. The agricultural students made last year 3,500 pounds of butter, and there are on the farm of the Institute 32 horses, 256 cows and 575 fowls, all looked after by students.

Great importance is attached to teaching domestic arts and science to the girl students. The sewing department is one of the most popular in the Institute. Thorough instruction is given to the girl boarders in the care of their rooms, clothes, and persons. Throughout the whole work of the school, one dominant aim is to raise the ideals of home-life among the coloured people. All over the South, new standards of home cleanliness, order and thrift are being carried by the old Hampton students. The latter, whether as teachers or workmen, can actually show their own people how things ought to be done.

But intellectual culture through books and regular "lessons" is far from being neglected. The school's industries are taken as starting points for instruction on the subject of natural materials, processes, etc., and the pupils are thus led, through a wide and practical study of geography, to realise the historical development of the activities of man:—

"In our study of language," the Principal writes in his report for 1901, "we are teaching our students to do something, then to talk and write about it, and finally to read about it. In the regular course, no books are used for the first three months except for reference. In the laboratories the young people make experiments in order to learn about water, air, the soil, and plants. These are followed by conversations and written exercises upon what they have seen and done. The study of mathematics is of the same practical character. Each student keeps a cash-book, showing what the school owes him for work, what he owes the school for board, etc. Each month the student has an account rendered him by the treasurer's office. These two statements should agree; if they do not, means are taken to discover on which side the error is. Articles are manufactured by students, and the cost in material, time, etc., is computed. Surveying operations are carried on. Bills and memoranda concerning transactions on the farm, in the workshops, and in the kitchens, are sent in for the classes to put into proper shape. Figures are made to live."

Instruction in vocal music is given to the pupils, and "the folklore songs are cherished." Every student learns to draw. The young men are under military discipline, and wear uniform, but arms are not allowed.

The Institute is organised into six departments—academic, normal training, business, trades, agriculture, and domestic science. There are both day and night classes, and also a "post-graduate" department, and a summer school. There is also an elementary day school, with kindergarten, for 400

coloured children from the neighbourhood. This serves as a practising school for the students who are learning to be teachers. For the academic department last year, half of those who made formal application for admission were refused, and more than twenty more were rejected at the entrance examination. This has produced greatly improved material. The academic course extends over three years. There is an entrance examination, and applicants for admission must be sixteen years of age. The following table shows the subjects of instruction :—

First Year.	Second Year.	Third Year.
{ Plant life, soils and insect life. }  Physics. Hygiene. Geography. Arithmetic. English Grammar. Literature and History. Bible Study. Vocal Music. Drawing. Penmanship. Gymnastics. Manual Training.	{ Farm Drainage. Rotation of Crops. Insects & plant diseases. Manures. }  Physics. Geography. Arithmetic. English Composition. Literature and History. Bible Study. Vocal Music. Drawing. Gymnastics. Manual Training.	Agricultural Science ( <i>Continued</i> ).  ( Nursing and Hygiene (for girls). Mathematics. English Composition. Literature and History Civics. Vocal Music. Drawing. Gymnastics. Manual Training.

The course in Manual Training, referred to in the above table, is made up as follows :—

	Boys.	Girls.
First Year.	Bench Work, 100 hours.	Slojd. Sewing.
Second Year.	Wood Turning, 100 hours. Tinsmithing, 100 hours.	Sewing. Cooking (including laying of table and waiting).
Third Year.	Forging, 100 hours.	Sewing. Cutting skirts and waists. Dressmaking.

The details of the "normal training course" need not be given. It extends over two years. The special agricultural course is intended for students who wish to fit themselves to be agricultural teachers and superintendents. It lasts for three years. There is also a business course on ordinary lines. An interesting feature is a technical and practical course in the useful applications of electricity. This includes wiring for electric bells, light, etc.; construction and management of telephones, dynamos, motors, etc.; management of small electric plants; telegraphy; electro-typing and electro-plating; construction and repair of electrical devices in general use. The aim of the course is "to prepare handy workers in electricity."

The trade courses are twelve in number. The student can learn a trade by logical and systematic steps from beginning to end. Theoretical training is given, but due regard is also paid to commercial work. The productive industries of the Institution are open to the students of the trade-school, and every trade school student is expected to spend a part of his time in them. In the study of each trade the following lines are followed:—(1) actual work at the bench; (2) instruction in the kinds and prices of materials used; (3) mechanical drawing, so far as possible bearing on the trade; (4) drill in competitive labour. Every trade-school student is required to devote nine hours a day to his trade and two hours to general education in the night school. For admission to the trade-school a student must be not less than 16 years of age, and able to pass the entrance examination to the academic department.

Last year the number of students who were given instruction in trades was as follows:—

Blacksmithing	25	Machinists' trade	13
Wheelwrighting	15	Bricklaying	6
Carpentry	38	Harness-making	5
Tailoring	20	Shoe-making	9
Painting	10	Upholstering	11
Tinsmithing	1	Printing	1
Steam fitting	5		

This number is smaller than in the preceding year owing to more stringent rules as to admission, especially to the printing office (which regularly employs seven graduates and ex-students) and the machine-shop.

The department of productive industries includes the wheelwright's and blacksmith's shop, the tin shop, tailoring department, shoe shop, harness shop, painting shop, machine shop, bricklaying and plastering department, industrial works (including saw mill and timber yard, planing mill, carpenter's shop), repair shop, normal school press, engineering department, farm, sewing and furnishing department, household and housework department (*i.e.* forms of domestic employment in the institution itself).



All the practical work about the school buildings and estate is done by the students—

“The industries are carried on as business enterprises and are open to students who have passed a year in the trade school. They afford the opportunity of learning how productive industries are managed, of making practical application of the principles learned in the trade-school, and incidentally of earning wages. They also furnish some opportunity for skilled labour to young men working for credit in order to enter the day-or trade-school.”

The idea is that a student should be enabled partly to pay his way through his course at the institute. All new students pay an entrance fee of £2. Tuition is free to deserving students. Board (including laundry, fire and lights, medical attendance, and a limited quantity of drugs, but not dentistry) is £2 a month. Books on an average cost £3 16s. a year. As a rule, the student pays for his board partly in cash, partly in labour. The students are in three categories:—

- (1) *Work Students.*
- (2) *Trade Students.*
- (3) *Day-school Students.*

(1) *Work Students* are students who cannot pay for their board in cash, but are admitted to the work-department of the night school. “If they are able-bodied and good workers, they may be able, by working all day and attending evening classes for a year, not only to earn their board for that year but to accumulate a balance with which to pay part of their board after they enter the day or trade school.”

(2) *Trade Students* are those who attend the night school in the trade-department. “They receive instruction in their trades five days in each week, and are allowed wages for part of their work in the trade-school. In addition, they are allowed one day in each week, if necessary, when they may earn part of their board by unskilled labour.”

(3) *Day-school Students* are students in the academic and post-graduate departments who “attend school four or five days each week, and work for a part of their board on the remaining one or two days.”

In all cases, the rate of wages varies according to the real value of the work done. Unsatisfactory labour is not accepted. The school does not guarantee that each student shall earn a fixed sum. Able-bodied, good workers can earn as much as £1 a month by working one or two days in each week.

The session extends from October to June, and covers thirty-six weeks with a short recess at Christmas. Day-school students are not expected to spend their summer vacation of three months at the Institute, but to get work elsewhere. Night-school students remain on the grounds throughout the year, but have no class-room work during the summer months.

In 1901, there were about 80 officers and teachers attached



to the Institute, and (including the Indian students, but excluding the children in the elementary day-school) 643 students, divided as follows:—

GIRLS.		Boys.	
Coloured	- - - 210	Coloured	- - - 311
Indian	- - - 54	Indian	- - - 65
White	- - - 1	White	- - - 2
<hr/>		<hr/>	
265		378	

One special object of the Institute is to prepare academic, industrial, and agricultural teachers for the Negro and Indian races. "Much stress is laid upon land-buying, home-life, and agricultural pursuits." The Institute has sent out 1,100 students who have completed the course of the Institute, and 5,000 who have received industrial training but have not completed the full course. Of the former, 60 per cent. are engaged in teaching. Of the students, who have been taught trades, about 70 per cent. are either working at them or teaching them.

The Hampton Institute needs to raise £16,000 a year by voluntary contributions to meet current expenses. This annual charge has regularly to be met, as the grants from the State of Virginia and (for the Indian students) from the United States Government, and the income from endowments do not cover the annual expenditure.

The influence of Hampton is spreading all over the South. "At the present time," it has been said by a well-informed observer, "there is almost no Southern State that is not putting forth efforts in the direction of securing industrial education for its white boys or girls, and in most cases it is easy to trace the history of these efforts back to General Armstrong." Much good has also been done by the Slater Fund, which is used almost exclusively at the present time for the promotion of industrial training for coloured people. The fund, which was created by Mr. J. F. Slater, of Norwich, Connecticut, in 1882, amounts to £200,000. Among the most noteworthy centres of industrial education may be named the Tuskegee Institute, of which more is said below, the Manassas Industrial School, the Manual Training School of St. Paul's at Lawrenceville, Virginia, Mount Meigs Institute at Waugh, Alabama, Denmark Industrial School, S.C., etc.

The most famous outgrowth from Hampton is the Normal and Industrial School at Tuskegee. Its president is Mr. Booker Washington, to whose undaunted perseverance and resource aided by the liberality of many friends, the successful development of the Institute is due. Mr. Washington tells us in his autobiography what were the chief lessons that he learnt as a student under General Armstrong at Hampton. They were (1) deep reverence for the General himself—"the rarest, strongest and most beautiful character that it has ever been my privilege to meet;" (2) from the unselfishness of the

teachers, the lesson that "those are happiest who do the most for others;" (3) an unlearning of a false notion of culture and of the employment of life.

"Before going there, I had a good deal of the then rather prevalent idea among our people that to secure an education meant to have a good, easy time, free from all necessity for manual labour. At Hampton, I not only learned that it was not a disgrace to labour, but learned to love labour, not alone for its financial value but for labour's own sake, and for the independence and self-reliance which the ability to do something which the world wants, brings."\*

In his work at Tuskegee Mr. Washington has overcome immense difficulties. The Institution began in 1881 in a dilapidated shanty, which was in such poor repair that, when it rained, a student held an umbrella over the master's head while he heard the lessons. It now (1901) consists of fifty buildings on an estate of 2,500 acres of land, exclusive of 25,000 acres of land with minerals granted by the Federal Congress in 1899 as an endowment. Two residents in Tuskegee first moved to get the school, and wrote to General Armstrong to recommend them a principal for it. When Mr. Washington arrived and developed his plans for industrial training, these two residents heartily supported it, and have done so ever since. One, Mr. Campbell, is a white man and an ex-slaveholder; the other, Mr. Adams, is an ex-slave. The latter mastered three trades while in slavery, and to this fact Mr. Washington attributes much of Mr. Adams' unusual power of mind:—

"If one goes to-day into any Southern town and asks for the leading and most reliable coloured man in the community, I believe that in five cases out of ten he will be directed to a negro who learned a trade during the days of slavery."†

One fundamental idea of Mr. Washington's work has been stated by him as follows:—

"I feel that agriculture should be made in a very large degree the basis for our work; that the salvation of my race will largely rest upon its ability and willingness to secure and cultivate properly the soil. . . . My feeling grows stronger each year that, perhaps in the heat of passion growing out of racial and sectional prejudices, we have not always given the Southern people due credit for the immense amount of help rendered to the negro during the period that he was a slave. The negro as a slave was started on the foundation of agriculture, mechanics, and household arts. While I would by no means limit his present education to these, I do believe we shall find it helpful for a number of years to come, in our methods of education, to give great attention to these fundamental occupations. In proportion as one owns the soil and has the mastery of these fundamental occupations, in the same proportion does he lay the foundation for the highest and most complete development of himself and children."‡

City life, with its narrow specialisation, its remoteness from Nature, and its

"Unrest which men miscall delight,"

is beginning to impair the true culture and many-sided experience which used to be imparted by healthy home-life under less

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\* "Up from Slavery," pp. 73-74, 66 and 58. † "Up from Slavery," p. 121.

‡ "Nineteenth Annual Report of the Principal of the Tuskegee Normal and Industrial Institute," 1901, p. 8.

artificial conditions. All over the world there are signs that the mischief is recognised and the danger discerned. But few such determined efforts to cope with the difficulty have been made as at Hampton and Tuskegee.

Mr. Washington has built up the Institution at Tuskegee from the very foundation. He has received much help from the coloured people. One old woman, of about seventy years of age came in, leaning on her stick, and said:—

"Mr. Washington, God knows I spent de bes' days of my life in slavery. God knows I's ignorant and poor. I knows what you is tryin' to do. I knows you is tryin' to make better men and better women for de coloured race. I ain't got no money, but I wants you to take dese six eggs what I's been savin' up, an' I wants you to put dese six eggs into de eddication of dese boys and gals." \*

Everything at the Institution at Tuskegee has grown up in natural order as the needs of the community have shown themselves. Its first animal was an old blind horse given by a white man in Tuskegee. Now it has 800 head of live stock. From the very beginning the students have erected their own buildings. Only four of the numerous buildings of the school have not been put up by the students themselves. They have learned (after three failures) to make bricks, and now carry on an important brick-making industry. The white population round Tuskegee respect the coloured students more and more, as the latter evince so much practical capacity. The students build all the waggons and carts wanted on the estate, and sell others to the public.

But this practical work was not carried through without protest, at first, on the part of the students and their parents:—

"Quite a number of letters came from parents protesting against their children engaging in labour while they were in the school. Other parents came to the school to protest in person. Most of the men students brought a written or verbal request from their parents to the effect that they wanted their children taught nothing but books. The more books, the larger they were and the larger the titles printed upon them, the better pleased the students and their parents seemed to be."

But Mr. Washington refused to abandon his principles or to modify his practice. As a result, there were last year 1,253 students in attendance at the Institute. About one-third were young women. The average age was 18½. None were admitted under 14 years of age, and unless they had had some general education. There is also an elementary school which serves as a preparatory school for the normal-training department. The staff of teachers, industrial instructors, clerks, etc., numbers 100. The annual maintenance of the Institute costs £20,000. The State of Alabama makes a small annual grant of £2,000. The total cost of educating each individual student is remarkably

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\* *Life from Slavery*, p. 122.

\* *Ibid.* p. 123. It is added in the *National Educational Association* at Charleston, S.C., in 1891, that "The President of the Hampton Institute, George F. Johnson, writes to the following effect: 'I am sending a set of "Lives of Kings".'

small—being about £15 per annum. During the year 1900-1901 the students contributed by their labour the sum of £13,458.

The industrial teaching at Tuskegee rests on three principles:— (1) that each student shall be fitted to meet actual conditions *as they now exist* in the part of the South where he lives, *i.e.*, shall be able to do what people want to have done; (2) that every student who leaves the school shall be able to make a living for himself and others, being both skilful, intelligent, and trustworthy; and (3) that every student shall feel that labour is a thing to be honoured, not escaped from.

In the Middle and New England States, "coloured children stand on the same footing with white children in all public school benefits; the separate school system has broken down entirely in the New England States, and is gradually breaking down in the Middle States, New Jersey and Pennsylvania being the only States in the latter group which still cling to the principle; and in many of the public schools of both groups of States negro teachers are employed, and stand upon the same footing as white teachers."\*

In the sixteen former slave States and the District of Columbia the estimated number of coloured children of five to eighteen years of age in 1899-1901 was 2,991,100, or 32·88 per cent. of the total number of all children between those ages in the same States. The number of children enrolled in the coloured schools (common schools and *public* high schools) was 1,539,507, or 51·46 of the total number of coloured children of school age. The percentage of enrolment of white children was 68·28. The average daily attendance in the coloured schools was 62·17 per cent. of the enrolment; that in the white schools, 65 per cent. The expenditure on coloured schools for 1899-1900 was estimated at about £1,423,760, as compared with about £5,695,054 spent on the common schools for white children.† It appears, therefore, that the average outlay per coloured child in a common school was about 18s. 5d., as compared with an average outlay of about 24s. 7d. per white child. Of all coloured pupils in the United States in 1890, only 1 in 100 was engaged in secondary or higher work.

A writer in the *Southern Workman* (the organ of the Hampton Institute) for October, 1901, states that the average length of the rural school term in the South is only twelve weeks per annum. It is urged that "a nine months' term is a necessity." To the same number Dr. DuBois, Professor of Economics in Atlanta University, contributes a well-illustrated article on the homes of the coloured population in the rural districts of the South. In the course of that article he states that:—

"The black schools of the South are in a shameful condition, and for a decade have been growing steadily worse. We need schools and teachers for them—persons trained as teachers."

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\* "Monographs on Education in the United States," 1900, vol. ii., p. 906.

† Report of United States Commissioner of Education 1899-1900, vol. i. p. 57.

For a pessimistic view of the economic and political bearings of the Negro question, reference may be made to an article on "Negro Education in the South," by Mr. P. B. Barringer, of the University of Virginia.\* One of his conclusions, however, is in accordance with the suggestions made in this paper:—

"The school training of the negro people should be primarily, . . . a moral training, given by those to whom morals mean more than words. . . . Their moral training should be supplemented by the three R's, and such simple training in agriculture and the domestic arts as all will need. The negro race is essentially a race of peasant farmers and labourers, and their education should first be directed to improving them as such."

Writing in the *Outlook* (August 3rd, 1901), Dr. Alderman thus remarks on education in the South:—

"It might as well be confessed that much of the 25,000,000 dollars spent on the negroes by Northern philanthropy has been literally wasted, and much of the 100,000,000 dollars spent on them by the South has been likewise wasted, but this waste is almost as much the fault of those who spent it as it is of the negroes who received it. The attempt to put the negro in possession of the traditional culture of the Anglo-Saxon race was an absurd piece of American haste. Putting behind us, then, the era of wrong ideals of education, of sentimentalism and of much solemn nonsense, let us go forward another step. The negro must be educated . . . Hampton Institute and Tuskegee Institute ought to be continually strengthened as the great training-grounds and experiment stations for the education of the negro race."

The important question of the training of negro teachers was discussed by the Rev. Dr. Frissell, President of the Hampton Normal and Agricultural Institute, at the meeting of the National Educational Association of the United States held at Charleston, S.C., in July, 1900. He especially emphasised the need (1) for conquering race-prejudice as far as possible; (2) for the creation of the work habit; (3) for a deepening of the sense of responsibility; (4) for cultivation of the power of initiation and self-help; (5) for giving a predominantly practical rather than a predominantly literary education; and (6) for laying great stress on the importance of cleanliness, decency, and refinement in the homes of the coloured people.

In the course of his address there occurred the following interesting passage:—"The rural schools of the South, as indeed of our whole country, have been entirely given up to the literary side of education. The results have been disastrous. Both boys and girls have left school feeling that it was degrading to work with their hands, and yet they were unable to find work of a different sort. The word "education" has become associated in their minds with an entirely different life from that which they have been living. Any training which makes a man or woman dissatisfied with the occupations which are open to them is of doubtful good. Many Southern men, seeing these results, have concluded that all education of the blacks is a failure. The mistake was not in giving them education, but in giving them the wrong sort of education. Where teachers have been sent out from agricultural and industrial schools, not only has the migra-

\* *Educational Review*, March, 1901.



tion to the cities been stopped, but crime has decreased and citizenship has improved. There came to the island of St. Helena, not many miles from Charleston, two refined, educated women, who interested themselves in the uplift of the blacks. They found the people superstitious to the last degree, and still practising many of their African rites. They could not count their fingers, did not know how to open a book, had never been away from the island, and knew of no city but Charleston. The huts of two rooms had the earth for a floor. In them lived as many of these degraded beings as could be crowded together, and morality was, of course, well-nigh unknown. A normal and industrial school was started on the island, and young coloured men and women went out from it into the public schools which were started there. These teachers had been trained to give instruction in agriculture, sewing, and the care of the home, as well as in books. They interested the people in buying land and securing homes. Thirty years passed by. A gentleman, who had known these negroes before this school was established, in revisiting the island, said the people did not seem to belong to the same race. 'Contented and prosperous, the negro farmers, well-clothed, well-fed, lived in neat, white cottages in the middle of their own well-tilled fields, where corn, potatoes, and cotton flourished.' The merchants on the island found the average bad debt small, and two constables sufficed for six thousand negroes. In the year 1893 dreadful floods took from these people nearly everything that they possessed, but in spite of this terrible calamity, followed by years of drought and low-priced cotton, the island presents to-day a colony of patient, hard-working people that are a monument to what teachers properly trained for their work can accomplish. Though there are between six and seven thousand blacks and only thirty whites, crime is unknown, and the fear of it never enters the minds of the Northern and Southern whites, who live together in the greatest harmony. The story of the coloured people of the island of St. Helena is not an isolated one. There are many schools in the South that can show like results of the practical training of teachers of the coloured race." \*

The work which is going forward in the industrial and agricultural training schools for the coloured race in the United States is one of great significance. Lessons can be learned from it which are of value for those engaged in education in parts of the British Empire; for example, in West Africa and the West Indies, where there are large black populations. But the subject suggests reflections upon the education given to white people as well as to negroes. Are there not considerable numbers of white people, and those by no means only of the poorer classes, who would derive more advantage from a course of education in which practical training played a considerable (though of course not the only) part, than from one which is almost exclusively

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\* Report, p. 484.



literary or theoretical in its character? As the effects of modern city life become more apparent, it is not unlikely that this question will grow in urgency and importance. Those who are interested in finding an answer to it may derive useful hints from the work of institutions like those at Hampton and Tuskegee.

M. E. SADLER

November, 1901.

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## APPENDIX A.

## THE FUNCTION OF EDUCATION IN DEMOCRATIC SOCIETY.\*

AN ADDRESS DELIVERED BEFORE THE BROOKLYN INSTITUTE ON  
OCTOBER 2, 1897. (FROM THE "OUTLOOK.")

What the function of education shall be in a democracy will depend on what is meant by democratic education.

Too many of us think of education for the people as if it meant only learning to read, write, and cipher. Now, reading, writing, and simple ciphering are merely the tools by the diligent use of which a rational education is to be obtained through years of well-directed labor. They are not ends in themselves, but means to the great end of enjoying a rational existence. Under any civilized form of government, these arts ought to be acquired by every child by the time it is nine years of age. Competent teachers, or properly conducted schools, now teach reading, writing, and spelling simultaneously, so that the child writes every word it reads, and, of course, in writing spells the word. Ear, eye, and hand thus work together from the beginning in the acquisition of the arts of reading and writing. As to ciphering, most educational experts have become convinced that the amount of arithmetic which an educated person who is not some sort of computer needs to make use of is but small, and that real education should not be delayed or impaired for the sake of acquiring a skill in ciphering which will be of little use either to the child or to the adult. Reading, writing, and arithmetic, then, are not the goal of popular education.

The goal in all education, democratic or other, is always receding before the advancing contestant, as the top of a mountain seems to retreat before the climber, remoter and higher summits appearing successively as each apparent summit is reached. Nevertheless, the goal of the moment in education is always the acquisition of knowledge, the training of some permanent capacity for productiveness or enjoyment, and the development of character. Democratic education being a very new thing in the world, its attainable objects are not yet fully perceived. Plato taught that the laborious classes in a modern commonwealth needed no education whatever. That seems an extraordinary opinion for a great philosopher to hold; but, while we wonder at it, let us recall that only one generation ago in

\* This essay is reprinted by the kind permission of the author from *Educational Reform, Essays and Addresses*, by Charles William Eliot, LL.D., President of Harvard University. New York: The Century Co. 1898.

some of our Southern States it was a crime to teach a member of the laborious class to read. In feudal society education was the privilege of some of the nobility and clergy, and was one source of the power of these two small classes. Universal education in Germany dates only from the Napoleonic wars; and its object has been to make intelligent soldiers and subjects, rather than happy freemen. In England the system of public instruction is but twenty-seven years old. Moreover, the fundamental object of democratic education—to lift the whole population to a higher plane of intelligence, conduct, and happiness—has not yet been perfectly apprehended even in the United States. Too many of our people think of popular education as if it were only a protection against dangerous superstitions, or a measure of police, or a means of increasing the national productiveness in the arts and trades. Our generation may, therefore, be excused if it has but an incomplete vision of the goal of education in a democracy.

I proceed to describe briefly the main elements of instruction and discipline in a democratic school. As soon as the easy use of what I have called the tools of education is acquired, and even while this familiarity is being gained, the capacities for productiveness and enjoyment should begin to be trained through the progressive acquisition of an elementary knowledge of the external world. The democratic school should begin early—in the very first grades—the study of nature; and all its teachers should, therefore, be capable of teaching the elements of physical geography, meteorology, botany, and zoölogy, the whole forming in the child's mind one harmonious sketch of its complex environment. This is a function of the primary-school teacher which our fathers never thought of, but which every passing year brings out more and more clearly as a prime function of every instructor of little children. Somewhat later in the child's progress toward maturity the great sciences of chemistry and physics will find place in its course of systematic training. From the seventh or eighth year, according to the quality and capacity of the child, plane and solid geometry, the science of form, should find a place among the school studies, and some share of the child's attention that great subject should claim for six or seven successive years. The process of making acquaintance with external nature through the elements of these various sciences should be interesting and enjoyable for every child. It should not be painful, but delightful; and throughout the process the child's skill in the arts of reading, writing, and ciphering should be steadily developed.

There is another part of every child's environment with which he should early begin to make acquaintance, namely, the human part. The story of the human race should be gradually conveyed to the child's mind from the time he begins to read with pleasure. This story should be conveyed quite as much through biography as through history; and with the descriptions of facts and real events should be entwined charming and uplifting products of the imagination. I cannot but think, however, that

the wholly desirable imaginative literature for children remains, in large measure, to be written. The mythologies, Old Testament stories, fairy tales, and historical romances on which we are accustomed to feed the childish mind contain a great deal that is perverse, barbarous, or trivial; and to this infiltration into children's minds, generation after generation, of immoral, cruel, or foolish ideas, is probably to be attributed, in part, the slow ethical progress of the race. The common justification of our practice is that children do not apprehend the evil in the mental pictures with which we so rashly supply them. But what should we think of a mother who gave her child dirty milk or porridge, on the theory that the child would not assimilate the dirt? Should we be less careful of mental and moral food-materials? It is, however, as undesirable as it is impossible to try to feed the minds of children only upon facts of observation or record. The immense product of the imagination in art and literature is a concrete fact with which every educated human being should be made somewhat familiar, such products being a very real part of every individual's actual environment.

Into the education of the great majority of children there enters as an important part their contribution to the daily labor of the household and the farm, or, at least, of the household. It is one of the serious consequences of the rapid concentration of population into cities and large towns, and of the minute division of labor which characterizes modern industries, that this wholesome part of education is less easily secured than it used to be when the greater part of the population was engaged in agriculture. Organized education must, therefore, supply in urban communities a good part of the manual and moral training which the coöperation of children in the work of father and mother affords in agricultural communities. Hence the great importance in any urban population of facilities for training children to accurate hand-work, and for teaching them patience, forethought, and good judgment in productive labor.

Lastly, the school should teach every child, by precept, by example, and by every illustration its reading can supply, that the supreme attainment for any individual is vigor and loveliness of character. Industry, persistence, veracity in word and act, gentleness, and disinterestedness should be made to thrive and blossom during school life in the hearts of the children who bring these virtues from their homes well started, and should be planted and tended in the less fortunate children. Furthermore, the pupils should be taught that what is virtue in one human being is virtue in any group of human beings, large or small—a village, a city or a nation; that the ethical principles which should govern an empire are precisely the same as those which should govern an individual; and that selfishness, greed, falseness, brutality, and ferocity are as hateful and degrading in a multitude as they are in a single savage.

The education thus outlined is what I think should be meant by democratic education. It exists to-day only among the most intelligent people, or in places singularly fortunate in regard to

the organization of their schools; but though it be the somewhat distant ideal of democratic education, it is by no means an unattainable ideal. It is the reasonable aim of the public school in a thoughtful and ambitious democracy. It, of course, demands a kind of teacher much above the elementary-school teacher of the present day, and it also requires a larger expenditure upon the public school than is at all customary as yet in this country. But that better kind of teacher and that larger expenditure are imperatively called for, if democratic institutions are to prosper, and to promote continuously the real welfare of the mass of the people. The standard of education should not be set at the now attained or the now attainable. It is the privilege of public education to press toward a mark remote.

From the total training during childhood there should result in the child a taste for interesting and improving reading, which should direct and inspire its subsequent intellectual life. That schooling which results in this taste for good reading, however unsystematic or eccentric the schooling may have been, has achieved a main end of elementary education; and that schooling which does not result in implanting this permanent taste has failed. Guided and animated by this impulse to acquire knowledge and exercise his imagination through reading, the individual will continue to educate himself all through life. Without that deep-rooted impulsion he will soon cease to draw on the accumulated wisdom of the past and the new resources of the present, and, as he grows older, he will live in a mental atmosphere which is always growing thinner and emptier. Do we not all know many people who seem to live in a mental vacuum—to whom, indeed, we have great difficulty in attributing immortality, because they apparently have so little life except that of the body? Fifteen minutes a day of good reading would have given any one of this multitude a really human life. The uplifting of the democratic masses depends on this implanting at school of the taste for good reading.

Another important function of the public school in a democracy is the discovery and development of the gift or capacity of each individual child. This discovery should be made at the earliest practicable age, and, once made, should always influence, and sometimes determine, the education of the individual. It is for the interest of society to make the most of every useful gift or faculty which any member may fortunately possess; and it is one of the main advantages of fluent and mobile democratic society that it is more likely than any other society to secure the fruition of individual capacities. To make the most of any individual's peculiar power, it is important to discover it early, and then train it continuously and assiduously. It is wonderful what apparently small personal gifts may become the means of conspicuous service or achievement, if only they get discovered, trained, and applied. A quick eye for shades of color enables a blacksmith to earn double wages in sharpening drills for quarrymen. A delicate sense of touch makes the fortune of a wool-buyer. An extraordinarily perceptive forefinger gives a

surgeon the advantage over all his competitors. A fine voice, with good elocution and a strong memory for faces and parliamentary rules, may give striking political success to a man otherwise not remarkable. In the ideal democratic school no two children would follow the same course of study or have the same tasks, except that they would all need to learn the use of the elementary tools of education—reading, writing, and ciphering. The different children would hardly have any identical needs. There might be a minimum standard of attainment in every branch of study, but no maximum. The perception or discovery of the individual gift or capacity would often be effected in the elementary school, but more generally in the secondary; and the making of these discoveries should be held one of the most important parts of the teacher's work. The vague desire for equality in a democracy has worked great mischief in democratic schools. There is no such thing as equality of gifts, or powers, or faculties, among either children or adults. On the contrary, there is the utmost diversity; and education and all the experience of life increase these diversities, because school, and the earning of a livelihood, and the reaction of the individual upon his surroundings, all tend strongly to magnify innate diversities. The pretended democratic school with an inflexible programme is fighting not only against nature, but against the interests of democratic society. Flexibility of programme should begin in the elementary school, years before the period of secondary education is reached. There should be some choice of subjects of study by ten years of age, and much variety by fifteen years of age. On the other hand, the programmes of elementary as well as of secondary schools should represent fairly the chief divisions of knowledge, namely, language and literature, mathematics, natural science, and history, besides drawing, manual work, and music. If school programmes fail to represent the main varieties of intellectual activity, they will not afford the means of discovering the individual gifts and tendencies of the pupils.

As an outcome of successful democratic education, certain habits of thought should be well established in the minds of all the children before any of them are obliged to leave school in order to help in the support of the family. In some small field each child should acquire a capacity for exact observation, and as a natural result of this acquirement it should come to admire and respect exact observation in all fields. Again, in some small field it should acquire the capacity for exact description, and a respect for exact description in all fields. And, lastly, it should attain, within the limited range of its experience and observation, the power to draw a justly limited inference from observed facts. I need not say that this power of just inference is an admirable one, which many adults never attain as the combined result of their education in childhood and their experience in after life. Yet democratic institutions will not be safe until a great majority of the population can be trusted not only to observe accurately and state precisely the results of observation, but also to draw just



inferences from those results. The masses of the people will always be liable to dangerous delusions so long as their schools fail to teach the difference between a true cause and an event preceding or accompanying a supposed effect. Thus, a year ago our nation came to the very brink of a terrible disaster because millions of our people thought the fall in the price of silver during the past twenty years was the cause of the fall in price of many other American products; whereas the prime cause of the general fall of prices, including the price of silver, was the immense improvement which has taken place since the Civil War in the manufacture and distribution of mechanical power—an operating cause which, in the near future, is going to produce much more striking effects than it has yet produced.

Any one who has attained to the capacity for exact observation and exact description, and knows what it is to draw a correct inference from well-determined premises, will naturally acquire a respect for these powers when exhibited by others in fields unknown to him. Moreover, any one who has learned how hard it is to determine a fact, to state it accurately, and to draw from it the justly limited inference, will be sure that he himself cannot do these things, except in a very limited field. He will know that his own personal activity must be limited to a few subjects, if his capacity is to be really excellent in any. He will be sure that the too common belief that a Yankee can turn his hand to anything is a mischievous delusion. Having, as the result of his education, some vision of the great range of knowledge and capacity needed in the business of the world, he will respect the trained capacities which he sees developed in great diversity in other people. In short, he will come to respect and confide in the expert in every field of human activity. Confidence in experts, and willingness to employ them and abide by their decisions, are among the best signs of intelligence in an educated individual or an educated community; and in any democracy which is to thrive, this respect and confidence must be felt strongly by the majority of the population. In the conduct of private and corporation business in the United States the employment of experts is well recognised as the only rational and successful method. No one would think of building a bridge or a dam, or setting up a power-station or a cotton-mill, without relying absolutely upon the advice of intelligent experts. The democracy must learn, in governmental affairs, whether municipal, State, or national, to employ experts and abide by their decisions. Such complicated subjects as taxation, finance, and public works cannot be wisely managed by popular assemblies or their committees, or by executive officers who have no special acquaintance with these most difficult subjects. American experience during the last twenty years demonstrates that popular assemblies have become absolutely incapable of dealing wisely with any of these great subjects. A legislature or a Congress can indicate by legislation the object it wishes to attain; but to devise the means of attaining that object in taxation, currency, finance, or public works, and to expend the

money appropriated by the constituted authorities for the object, must be functions of experts. Legislators and executives are changed so frequently, under the American system of local representation, that few gain anything that deserves to be called experience in legislation or administration; while the few who serve long terms are apt to be so absorbed in the routine work of carrying on the government and managing the party interests, that they have no time either for thorough research or for invention. Under present conditions, neither expert knowledge nor intellectual leadership can reasonably be expected of them. Democracies will not be safe until the population has learned that governmental affairs must be conducted on the same principles on which successful private and corporate business is conducted; and therefore it should be one of the principal objects of democratic education so to train the minds of the children, that when they become adult they shall have within their own experience the grounds of respect for the attainments of experts in every branch of governmental, industrial, and social activity, and of confidence in their advice.

The next function of education in a democracy should be the firm planting in every child's mind of certain great truths which lie at the foundation of the democratic social theory. The first of these truths is the intimate dependence of each human individual on a multitude of other individuals, not in infancy alone, but at every moment of life—a dependence which increases with civilization and with the development of urban life. This sense of mutual dependence among multitudes of human beings can be brought home to children during school life so clearly and strongly that they will never lose it. By merely teaching children whence come their food, drink, clothing, and means of getting light and heat, and how these materials are supplied through the labors of many individuals of many races scattered all over the world, the school may illustrate and enforce this doctrine of intricate interdependence, which really underlies modern democracy—a doctrine never more clearly expressed than in these two Christian sentences: "No man liveth to himself," and "We are every one members one of another." The dependence of every family, and indeed every person, on the habitual fidelity of mechanics, purveyors, railroad servants, cooks, and nurses can easily be brought home to children. Another mode of implanting this sentiment is to trace in history the obligations of the present generation to many former generations. These obligations can be easily pointed out in things material, such as highways, waterworks, fences, houses, and barns, and, in New England at least, the stone walls and piles of stone gathered from the arable fields by the patient labour of predecessors on the family farm. But it may also be exhibited to the pupils of secondary schools, and, in some measure, to the pupils of elementary schools, in the burdens and sufferings which former generations have borne for the establishment of freedom of conscience and of speech, and of toleration in religion, and for the development of the institutions of public justice. Of course

history is full of examples of the violation of this fundamental democratic doctrine of mutual help. Indeed, history, as commonly written, consists chiefly in the story of hideous violations of this principle, such as wars and oppressions, and the selfish struggles of class against class, church against church, and nation against nation. But these violations, with the awful sufferings that follow from them, may be made to point and emphasize the truth of the fundamental doctrine; and unless the teaching of history in our public schools does this, it were better that the subject should not be taught at all.

Democratic education should also inculcate on every child the essential unity of a democratic community, in spite of the endless diversities of function, capacity, and achievement among the individuals who compose the community. This is a doctrine kindred with that just mentioned, but not identical. It is a doctrine essential to diffused democratic contentment and self-respect, but materially different from the ordinary conception of equality of condition as a result of democracy; for unity is attainable, while equality of condition is unnatural and unattainable. The freedom and social mobility which characterize the democratic state permit, and indeed bring about, striking inequalities of condition; and if the surface of democratic society should be leveled off any day, inequalities would reappear on the morrow, unless individual freedom and social mobility should be destroyed. The children of a democratic society should, therefore, be taught at school, with the utmost explicitness, and with vivid illustrations, that inequalities of condition are a necessary result of freedom; but that through all inequalities should flow the constant sense of essential unity in aim and spirit. This unity in freedom is the social goal of democracy, the supreme good of all ranks of society, of the highest no less than of the lowest.

Another ethical principle which a democracy should teach to all its children is the familiar Christian doctrine that service rendered to others is the surest source of one's own satisfaction and happiness. This doctrine is a tap-root of private happiness among all classes and conditions of men; but in a democracy it is important to public happiness and well-being. In a democracy the public functionary is not a master, but a trusted servant. By excellence of service he earns not only a pecuniary consideration, but also respect and gratitude. This statement applies just as well to a letter-carrier, a fireman, or a village selectman, as it does to a high-school teacher, a judge, or a governor. Democracy applies literally the precept, "If any man would be great among you, let him be your servant." The quality of this faithful service and its rewards should be carefully taught in school to all children of a democracy. The children should learn that the desire to be of great public service is the highest of all ambitions; and they should be shown in biography and in history how the men and women who, as martyrs, teachers, inventors, legislators, and judges, have rendered great service, have thereby won enduring gratitude and honor.

Since it is a fundamental object of a democracy to promote the happiness and well-being of the masses of the population, the democratic school should explicitly teach children to see and utilize the means of happiness which lie about them in the beauties and splendors of nature. The school should be a vehicle of daily enjoyment, and the teacher should be to the child a minister of joy. Democratic society has already learned how to provide itself—at least, in the more intelligent communities—with open grounds in cities, and parks in suburbs, and has in these ways begun to provide directly for the wholesome pleasures of the population. It should be a recognized function of the democratic school to teach the children and their parents how to utilize all accessible means of innocent enjoyment.

Finally, the democratic school must teach its children what the democratic nobility is. The well-trained child will read in history and poetry about patricians, nobles, aristocrats, princes, kings, and emperors, some of them truly noble, but many vile; and he will also read with admiring sympathy of the loyalty and devotion which through all the centuries have been felt by generous men and women of humbler condition toward those of higher. He will see what immense virtues these personal loyalties have developed, even when the objects of loyalty have been unworthy; and he will ask himself, "What are to be the corresponding virtues in a democracy?" The answer is, Fidelity to all forms of duty which demand courage, self-denial, and zeal, and loyal devotion to the democratic ideals of freedom, serviceableness, unity, toleration, public justice, and public joyfulness. The children should learn that the democratic nobility exists, and must exist if democracy is to produce the highest types of character; but that it will consist only of men and women of noble character, produced under democratic conditions by the combined influences of fine inherited qualities, careful education, and rich experience. They should learn to admire and respect persons of this quality, and to support them, on occasion, in preference to the ignoble. They should learn that mere wealth has no passport to the democratic nobility, and that membership in it can be transmitted to children only through the transmission of the sound mental and moral qualities which are its sole warrant. This membership should be the rightful ambition of parents for their children, and of children for their future selves. Every person of the true quality, no matter what his station or vocation, is admitted of right to this simple democratic nobility, which home, church, and school unite in recruiting; and there are, consequently, more real nobles under the democratic form of government than under any other.

CHARLES WILLIAM ELIOT.



## APPENDIX, B.

## BIBLE READING IN THE PUBLIC SCHOOLS OF THE UNITED STATES.\*

EXTRACT FROM THE REPORT OF PRESIDENT OF CHICAGO WOMAN'S EDUCATIONAL UNION, 1896-7.

I.—Report concerning Bible reading in the public schools of the United States, prepared by Elizabeth B. Cook, President Chicago Woman's Educational Union.

- (1) Origin of the investigation.
- (2) Detailed report, by States, of the present practice relative to Bible reading in the public schools.
- (3) Tabulated summary of statements made by school superintendents.

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In May, 1896, the Chicago Woman's Educational Union requested its president to prepare a statistical and historical report concerning Bible reading in the public schools of the United States. In compliance with the request, letters of inquiry were sent to the 45 State superintendents of schools, all of which, with two exceptions, have been answered. Two forms of blanks were sent to county and city superintendents of schools, one containing the following questions, the other two less :—

Are portions of the Bible read regularly in all the schools of your city?  
 If not, is the Bible read in part of them?  
 If read, for how many years has this been the custom?  
 If not, was it formerly read there?  
 For how many years?  
 Is there a rule of your board on this matter

Although many of these blanks reached the superintendents after their schools were closed for the summer, and many school officers had no accurate data upon the subject, replies were received in response to these inquiries from every State of the Union. The earnest and cordial spirit pervading these returns was noticeable.

Dividing the United States for convenience into the North and South Atlantic, the South and North Central, and the Western portions, their attitude toward Bible reading in the public schools is found to be as follows :—

## NORTH ATLANTIC DIVISION.

## MAINE.

Hon. W. W. Stetson, State Superintendent of Schools, Augusta, Me. reports in general as follows :—

“I am very happy to be able to report that the opening exercise in most of the common schools of this State consists of reading a passage of Scripture by the teacher and repeating the Lord's Prayer by the teacher and pupils.

“This custom is so general that I think it is unnecessary to attempt to collect any statistics upon this matter in this State.”

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\* From the Report of the United States Commissioner of Education 1897-98.—Washington, 1899.





"SEC. 18. The morning exercises of all the schools shall commence with the reading of the Scriptures, followed by the Lord's Prayer."

Hon. Fred Gowing, State Superintendent of Schools, Concord, N. H. writes June 20, 1896 :—

"I not only do not object to using the actual Bible, leaving to the teachers' discretion the selection of passages, but encourage it."

Reports from superintendents or teachers in all but one of the counties of New Hampshire have been received. In all the schools of the State, with a very few exceptions, the Bible is read, and has been since the schools were first established (about 1623). Many of the school boards emphasise the State Law for Bible reading with local rules.

#### VERMONT.

Hon. Mason S. Stone, State Superintendent of Education, Montpelier, Vt., writes :—

"We encourage Bible reading in our public schools, although we have no law requiring it. The Bible is read in nearly every school. The Lord's Prayer and Bible verses are quite generally recited."

Three local reports received show that the general custom from the earliest existence of the schools has been to have the Bible read daily. One of these states that the Bible is not read in the graded schools of the town, but in the outlying districts only. A second states that it always has been read in a part of the schools, and the third that it has always been read in all schools."

#### MASSACHUSETTS.

Hon. Frank A. Hill, Secretary State Board of Education, Boston, Mass., writes June 15, 1896 :—

"So far as my knowledge, my observation, and my experience go, the schools of Massachusetts read selections from the Bible once a day. The repetition of the Lord's Prayer is generally used in connection with the devotional exercises, and the singing of sacred music, while not universal, is exceedingly common."

The enthusiasm with which chairmen of school boards and other officers of schools send in their affirmative reports (100 received) shows a deep interest in Bible reading in schools. For two hundred and seventy-six years the Bible has been most intelligently read by the people of Massachusetts.

The State Law upon this subject is as follows :—

"SEC. 32. The school committee shall require the daily reading in the public schools of some portion of the Bible without written note or oral comment, but they shall not require a scholar whose parent or guardian informs the teacher in writing that he has conscientious scruples against it to read from any particular version, or to take any personal part in the reading ; nor shall they direct to be purchased or used in the public schools schoolbooks calculated to favor the tenets of any particular sect of Christians."

In the current edition of the State School Laws the following annotations are made to this section :—

"The school committee of a town may lawfully pass an order that the schools thereof shall be opened each morning with reading from the Bible and prayer, and that during the prayer each scholar shall bow the head, unless his parents request that he shall be excused from doing so ; and may lawfully exclude from the room a scholar who refuses to comply with such order, and whose parents refuse to request that he shall be excused from doing so. (12 Allen, 127.)

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"It is the settled policy of the State to require the use of the Bible in the public schools, and since the passage of the Act of 1855 there have been but few objections made.

"The duty of the committees is performed if they require the Bible to be read by the teachers as a part of the morning devotional service. The law does not prescribe, as a rule from which there are to be no deviations, that every pupil who may be able to read the Bible shall be required to do so. In this respect a discretion is vested in the committee. No sectarian books are used in the schools."

Many school committees have local rules, some of which we quote below :—

### *Rule of the City of Cambridge.*

"Morning exercises in all the schools shall begin with reading from the Scriptures and the Lord's Prayer."

### *Rule of the City of Beverley.*

"11. All teachers shall, according to the requirements of the laws of this Commonwealth, as set forth in the public statutes, in Chapter 44, Section 15, exert their best endeavours to impress on the minds of children and youth committed to their care and instruction the principles of piety and justice, and a sacred regard to truth ; love of their country, humanity, and universal benevolence ; sobriety, industry, and frugality ; chastity, moderation, and temperance, and those other virtues which are the ornament of human society, and the basis upon which a republican constitution is founded ; and it shall be the duty of such instructors to endeavour to lead their pupils, as their ages and capacities will admit, into a clear understanding of the tendency of the above-mentioned virtues, to preserve and perfect a republican constitution, and secure the blessings of liberty, as well as to promote their future happiness, and also to point out to them the evil tendency of the opposite vices."

"30. The morning session in all the schools shall open with reading from the Bible."

### *The Chelsea School Law.*

"SEC. 45. In each schoolroom the morning exercises shall commence with the reading of suitable selections from the Bible by the teacher, to be followed by the audible repetition of the Lord's Prayer by the teacher alone, or by the teacher and pupils in concert.

"SEC. 46. Good morals being of the first importance to the pupils, and essential to their highest progress in useful knowledge, instruction therein shall be given in each of the schools, in conformity with the provisions of public statutes (Chap. 44, Sec. 15), and the principles of truth and virtue faithfully inculcated upon all suitable occasions. The pupils shall be carefully instructed to avoid idleness, profanity, falsehood, deceit, and every wicked and disgraceful practice, and to conduct themselves in an orderly and proper manner ; and it shall be the duty of their instructors so far as possible to exercise a general inspection over them in these regards both in school hours and while going to and from school."

### *The Fitchburg Rule.*

"SEC. 3. The beginning of the morning exercises in the school shall include the reading of some portion of the Bible without comment, but no scholar shall be required to read therefrom whose parent or guardian shall notify the teacher that he or she has conscientious scruples against such reading."

### *The Salem Regulation.*

"Morning exercises in all the schools shall commence with the reading by the teacher of some portion of the Bible without written note or

oral comment : but no pupil shall be required to read from any particular version whose parent or guardian shall state in writing that he has conscientious scruples against allowing him to read therefrom."

*New Bedford School Law.*

[Chapter XV., Sec. 4, as amended December, 1894.]

"*Opening morning exercises.*—A portion of the sacred Scriptures shall be read without comment to the pupils by the teacher of each school at the opening of the morning session ; also a patriotic selection shall be recited or a patriotic song shall be sung by the school ; and the board recommends that the Lord's Prayer be repeated by the teacher alone, or by the teacher and pupils in concert."

*The Newburyport Rule.*

"SEC. 3. The teachers shall open their respective schools in the morning with reading of the Scriptures and the recitation of the Lord's Prayer, the opening exercises not exceeding ten minutes in length ; and it is recommended that the afternoon services close with singing."

In 1642 an ordinance was passed requiring "chosen men" to take account of the ability of children "to read and understand the principles of religion and the capital laws of this country."

An ordinance establishing grammar schools was passed November 11, 1647, in the preamble of which occurred a clause indirectly showing that our earliest legislators attached importance to a knowledge of the Bible. The clause is [that beginning] as follows :—

"It being one of the chief projects of that old deluder, Satan, to keep men from the knowledge of the Scriptures, etc."

In 1654 an ordinance was passed forbidding the continued employment of teachers who had manifested themselves "scandalous in their lives, and not giving due satisfaction according to the rules of Christ."

More than one hundred years later, in 1789, an Act was passed making it the duty of instructors to impress upon their pupils "the principles of piety, justice, and a sacred regard to truth ; love to their country, humanity, and universal benevolence ; sobriety, industry, and frugality ; chastity, moderation, and temperance, and those virtues which are the ornament of human society, and the basis upon which the Republican Constitution is structured.

"According to the New England theory of life, it was absolutely essential that everyone from early childhood should be taught to 'read and understand the Bible and other good and profitable printed books in the English tongue.'"

This feeling strengthened with the passing years, and, as regards Bible reading in schools, indefiniteness changed to clearness, and option concerning Bible reading to judicious and careful requirement.

RHODE ISLAND.

Under date of June 13, 1896, Hon. Thomas B. Stockwell, State Commissioner of Public Schools, Providence, writes :—

"I inclose extract from the last edition of our school manual, which shows very clearly the relation of the State to the subject of religious and moral teaching in the public schools. Twenty years ago I made quite a careful study of this subject, and embodied it in my annual report, of which I am able to send you a copy.\*

"It is my impression that there has not been much change since then. If any change, it is in the direction of less reading of the Bible."

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\* The great value of this article has lead to its insertion almost as a whole on the following pages.

The report states that 10 towns require by rule the reading of the Bible. That in five it is simply recommended by them; that in six either the reading of the Bible or a prayer, generally the Lord's Prayer, is required. In one town some moral or religious exercise is made obligatory. In 12 towns no rule or recommendation upon the specific subject exists.

Passing from rule to practice, Mr. Stockwell found it to be the almost universal custom to open the daily session with some form of devotional exercise, of which the reading of the Scriptures formed an important part.

Returns received directly from 11 towns and cities in Rhode Island ratify, so far as their localities are concerned, Mr. Stockwell's report. They show (1) that the use of the Bible is recommended to teachers; (2) that it has always been the custom in the school; (3) six of the 11 cities and towns report that the Bible is read in every school. The management in one city and in one town have adopted rules requiring Bible-reading. In the rest Bible-reading is optional, but universal in four of the remaining nine localities, and almost universally read in two more, and read in some of the schools of the remaining three. One of these is Providence, the largest city in the State.

Mr. Stockwell's report contains the following on—

### *Moral Culture.*

"While we acknowledge fully the labors of the teachers in this branch of their work, we cannot also fail to recognise the existence of a lower moral tone in the community than formerly prevailed. For various reasons some inseparable from our condition, and others the result of our own negligence, we have fallen upon a period when the public morals are at a low state. In this condition of affairs there is devolved upon the schools the greater necessity for lending all the aid in their power to the work of elevation.

"School officers in their selection of teachers should exercise a wide discretion, and seek for those individuals who can be relied on as efficient and faithful instructors in virtue. Teachers are called upon to throw more of devotion into their work, and to labor for the education of the heart as well as of the head. They must not be satisfied with keeping the letter of the law, but must live up to its spirit with a heartiness that shall carry before it all opposition and indifference.

"The accompanying special report to the general assembly was prepared, as its tenor indicates, in response to a resolution passed by that honorable body at the May Session. I have thought it best to incorporate it in this report in order that it might take a more permanent form, regarding it as of some future value, at least as showing the present status of our schools in reference to this great question.

*"To the Honorable the General Assembly :*

"I have the honor to present the following report in response to a resolution adopted by your honorable body at the May Session, 1876, to wit :

*"Resolved (the Senate concurring), That the Commissioner of Public Schools be instructed to report to the General Assembly, at the next January Session, whether any and what means are used in the public schools "to implant and cultivate in the minds of all children therein the principles of morality and virtue," as provided in Section 6 of Chapter 54 of the general statutes.'*

"The chapter of the general statutes from which the quotation in the above resolution is made is the one which refers mainly to teachers, the conditions of their service, and their duties. The whole section referred to reads as follows : Every teacher shall aim to implant and cultivate in the minds of all children committed to his care the principles of morality and virtue.

"From the tenor of this chapter, and especially of this section, coupled with the fact that the subject of *morals* is nowhere else alluded to in the laws relating to schools, and that such has always been the fact since the



first enactment of the law, I have always supposed it to have been the purpose of the General Assembly to place the subject of moral instruction chiefly in the hands of the individual teachers in preference to those of any official or body of officials.

"In accordance, therefore, with these facts, we cannot expect to find that well-defined system or comprehensive plan of instruction in this department that we should in reference to those subjects which are specifically placed under the control and direction of the school authorities. It needs, however, but a survey of the various reports of the school committees of the several cities and towns in the State for the last few years, and especially for the past year, to show conclusively that the school authorities throughout the State are deeply alive to the importance of the subject, that they are ready and anxious to take as advanced ground in the matter as the sentiment of their respective constituencies will permit, and that they are now exerting a constant influence in all directions upon both teacher and pupil in order to bring them up to a higher moral law.

"Of the means used to secure moral and virtuous development, we naturally consider the Bible first. As a result of my inquiries on the subject, I have received information from all but two of the 36 cities and towns in the State. I find that in 10 towns the reading of the Bible is required by a rule of the committee; that in five it is simply recommended by them; that in six either the reading of the Bible or a prayer, generally the Lord's Prayer, is required, while in one town 'some moral or religious exercise' is made obligatory. In the other 12 towns no rule or recommendation upon this specific subject exists.

"Passing now from rule to practice, I find from the testimony of the several town superintendents that not only in those towns where there is a specific rule or recommendation, but also in all of the others it is almost the universal custom to open the daily session with some form of devotional exercises, of which the reading of the Scriptures forms generally an important part, and often the whole. As a result of my own observation I have noticed that it is now much more common than formerly for the teacher to read the Scripture selection alone, instead of making the exercise a concert or responsive one. This course I believe to be the best calculated to produce the desired impression upon the minds and hearts of the pupils. It will thus be seen that there are but few schools in our State wherein the pupils are not brought into daily contact with the Scriptures, the fountain of all truth, the source of all virtue, the essence of all morality. \* \* \*

"As every school is, in a certain sense, a miniature government and the same principles underlie its existence and control its life as in the case of the nation, it is, of course, both the duty and the privilege of the teacher to call the attention of his pupils to these fundamental ideas and to impress them upon them as the mainspring of their actions. \* \* \*

"A reference to the 'rules and regulations' adopted by the several school committees will, in nearly all cases, I think, reveal the presence of one or more provisions upon the matter of morals and behaviour, and referring to both teacher and pupil. In illustration of this influence I have the pleasure of quoting one rule from each of the recent reports for two towns, situated quite remote from each other, and thus fairly representing the State as a whole.

"The first: 'It shall be the duty of the teachers to use their best endeavors to impress upon the minds of the youth committed to their care and instruction the principles of piety, justice, and a sacred regard for truth; love to their country, humanity, and universal benevolence; sobriety, industry, frugality, chastity, moderation, temperance, and those other virtues which are the ornament of human society and the basis upon which a republican constitution is founded; and they shall endeavor to lead their pupils, as their ages and capacities will allow into a clear understanding of the tendencies of those virtues, to preserve and perfect a republican constitution and secure the blessings of liberty as well as promote their own happiness, and also to point out to them the evil tendency of the opposite vices.'

"The second: 'Good morals being of the first importance, and essential to their progress in useful knowledge, pupils are enjoined to avoid all



vulgarity and profanity, falsehood and deceit, and every wicked and disgraceful practice. They will be expected to conduct themselves in an orderly manner both in and out of school ; to be diligent and attentive to their studies ; to treat each other kindly and politely in all their intercourse ; to respect and obey their teachers, and to be punctual in their attendance.'

"From what precedes it will be seen, I think, that the main force to be relied upon for the promotion of moral culture is not so much a system of ethics or a well-organised plan of instruction as the *life* which the teacher lives before his pupils. The most effective means for implanting the seeds of virtue and inculcating a sound morality are often the almost unconscious words and acts of the sincere and faithful teacher, which are, as it were, the spontaneous overflow of his own pure character. \* \* \*

"In recognition of this truth, and also of the consequent responsibility resting upon them, I am glad to be able to report that the school authorities of various towns are adopting more and more stringent rules in reference to the moral qualifications of their teachers. I hope the standard will be raised still higher, and they shall be sought for not merely the negative grace of a character without reproach, but the positive virtue of an aggressive morality."

From "Instruction to Teachers," in the last school manual of Rhode Island, Mr. Stockwell sends the following :—

"*Moral instruction* should by all means be inculcated by the teacher, but yet so as to avoid all sectarian comment or bias.

"The rule as laid down in the law of the State of Massachusetts (*see* text of law under 'Massachusetts'), while it points out and inculcates the duty of the teacher to give moral instruction, is carefully drawn to avoid giving countenance to any attempt to impart sectarian instruction, and may well be followed in this Commonwealth. [And adopted by it and every other Commonwealth in the United States.—Ed.]"

Here follows extract from Massachusetts statutes, as quoted under "Massachusetts" in "Rule of the City of Beverly."

Mr. Stockwell continues :—

"*Reading the Bible and praying in schools.*—The constitution and laws of the State give no power to a school committee, nor is there any authority in the State by which the reading of the Bible or praying in school, either at the opening or at the close, can be commanded and enforced. On the other hand, the spirit of the constitution and the neglect of the law to specify any penalty for so opening or closing a school, or to appoint or allow any officer to take notice of such an act, do as clearly show that there can be no compulsory exclusion of such reading and praying from our public schools. The whole matter must be regulated by the consciences of the teachers and inhabitants of the district, and by the general consent of the community. Statute law and school committees' regulations can enforce neither the use nor disuse of such devotional exercises. School committees may recommend, but they can go no further.

"It is believed to be the general sentiment of the people of Rhode Island that this matter shall be left to the conscience of the teacher, and it is expected that if he read the Bible as an opening exercise, he shall read such parts as are not controverted or disputed, but such as are purely or chiefly devotional ; and if he pray at the opening of his school, he shall be very brief, and conform as nearly to the model of the Lord's Prayer as the nature of the case will admit. And in all this he is bound to respect the conscientious scruples of the parents of the children before him, as he would have his own conscientious scruples respected by them in return ; always, of course, taking care that in the means he uses to show his respect for the consciences of others he does not violate the law of his own conscience.

"In regard to the use of the Bible in schools, two observations occur here. If the committee prescribes, or the teacher wishes to have the Bible read in school, it should not be forced upon any children whose parents have any objections whatever to its use. In most cases the teacher will

have no difficulty with the parents on this subject if he conducts with proper kindness and courtesy."

#### CONNECTICUT.

Charles D. Hine, secretary of the state board of Education, Hartford, Conn., under date of July 17, 1896, writes :—

"In most schools of the State the Bible is read, or some part of the Bible recited ; often it is a portion of the Psalter. There is, however, no uniform practice. In most of the best schools the only opening exercise is the Lord's Prayer, or some devotional exercise, with singing. As I have said, however, in most schools the Bible is read, and always has been read. Generally there is no objection to it."

Hartford, Connecticut's largest city, has a rule for Bible reading, which, it may be unnecessary to say, is observed.

Bridgeport and Meriden (with a population of 48,856 and 21,230 respectively), have each a carefully observed rule requiring Bible reading. Although left to the teacher's discretion, so far as the reports received show, in the other cities of the State, Bible reading is carefully observed in all of them, with one exception, and in many of the schools of that one.

The early legislation of Connecticut is similar to, when not identical with, that of Massachusetts.

From the summary of the system of public instruction in Connecticut at the opening of the eighteenth century, made by Dr. Henry Barnard, notice the following :—

"It is an obligation on every parent and guardian of children 'not to suffer so much barbarism in any of their families as to have a single child or apprentice unable to read the Holy Word of God and the good law of the colony,' and also 'to bring them up to some lawful calling or employment,' under a penalty for each offense."

#### NEW YORK.

The great metropolis of the Empire State has a positive law concerning Bible reading in public schools. It stands as follows :—

##### *Rule for Bible Reading in Schools in the City of New York.*

[All schools to be opened by reading the Bible.]

"SEC. 134. All the schools of this city under the jurisdiction of the board of education shall be opened with reading a portion of the Holy Scriptures without note or comment."

Further instructions relating to this subject in the city are :—

"SEC. 1062. No school shall be entitled to or receive any portion of the school moneys in which the religious doctrines or tenets of any particular Christian or other religious sect shall be taught, inculcated, or practiced, or in which any book or books containing compositions favorable or prejudicial to the particular doctrines or tenets of any particular Christian or other religious sect shall be used, or which shall teach the doctrines or tenets of any other religious sect, or which shall refuse to permit the visits and examinations provided for in this chapter. But nothing herein contained shall authorize the board of education to exclude the Holy Scriptures, without note or comment, or any selections therefrom, from any of the schools provided for by this chapter ; but it shall not be competent for the said board of education to decide what version, if any, of the Holy Scriptures, without note or comment, shall be used in any of the schools : *Provided*, That nothing herein contained shall be so construed as to violate the rights of conscience as secured by the Constitution of this State and of the United States."

## 580 *Bible Reading in the Public Schools of the United States.*

The rule for Brooklyn, which she has observed with no record to the contrary since her schools were established, is as follows :—

*“ Part III., Section 5.—(At the opening of school.) A portion of the Holy Scriptures shall be read aloud by one of the teachers in each department without note or comment.”*

Returns from 94 school officers, residing in 48 of the 59 counties of New York, are received. About one half of them as school commissioners speak for a section of a county each. Fifty-three of these report Bible reading as an opening exercise in all of their schools. Two others think the custom is universal, it being the express wish of the superintendents to have the Bible read. Twelve others report that the Bible is read in nearly all or in a very large percent. of their schools, and the statement is generally made that the custom is as old as the schools. Three report written or unwritten local rules prohibiting Bible reading. Nine others report no Bible reading. In these schools, with two exceptions, it is stated that the Bible was formerly read in them. Three state that the Bible is read less than formerly, while two report that the custom seems to be growing, a larger per cent. of teachers in the counties reading the Bible than formerly. In the rest the Bible is read to some extent. As teachers do not usually report concerning this custom, data are not so easily obtained nor so reliable as on some less important subjects. The reports show unmistakably that New York in its public schools is a Bible-reading State.

The early records of New York afford many proofs that its tendencies were not very different from those of its more eastern sisters. The following facts and statements are found in Morris's *“History of the Character of our Civil Institutions”* :—

“The first emigrants (to New York) were those who had fled from the severity of religious persecution in the seventeenth century in the French-Belgic provinces, and came with a faith tried in a fiery furnace.

“The East India Company, formed in 1621, stipulated that ‘where emigrants went forth under their auspices and that of the States-General of Holland, it should be their duty to send out a schoolmaster, being a pious member of the church,’ whose office it was to instruct the children and preside in their religious meetings on the Sabbath and other days, leading in the devotions, and reading a sermon, until the regular ministry should be established over them.

“The first settlers of New Rochelle and West Chester counties were said to have such regard for the sanctity of the Sabbath that they would take up their march of foot Saturday noon for public worship 20 miles away, engage in the services, remain until after midnight, and then take up their homeward way, relieving the monotony and weariness of the journey with the singing of hymns.

“An order for the opening and closing exercises of a school at Long Island, adopted October 8, 1682, contains the following :—

“‘ART. 2. When school opens one of the children shall read the morning prayer as it stands in the catechism, and close with the prayer before dinner, and in the afternoon the same. The evening school shall begin with the Lord's Prayer, and close by singing a psalm.

“In a letter written on the 11th of August, 1628, by Rev. Jonas Michaëllus, the first minister of the Dutch Reformed Church in the United States, there is found the following statement :—

“‘We must have no other object than the glory of God in building up His kingdom and the salvation of many souls. As to the natives of this country, I find them entirely savage and wild, proficient in all wickedness, who serve nobody but the devil. Let us, then, leave the parents in their condition, and begin with the children who are still young, and place them under the instruction of some experienced and godly schoolmaster, where they may be taught especially in the fundamentals of our Christian religion.’

“The constitution of the State as formed in 1777, and also as reformed in 1821, contains the following :—

“‘This convention doth further, in the name and by the authority of

the good people of this State, ordain, determine, and declare that the free exercise and enjoyment of religious profession and worship, without discrimination or preference, shall forever hereafter be allowed within this State to all mankind : *Provided*, That the liberty of conscience hereby granted shall not be so construed as to excuse acts of licentiousness or justify practices inconsistent with the peace or safety of the State.'

"In 1838 the Legislature of New York by a vote nearly unanimous declared that—

"'In all countries some kind of religion or other has existed in all ages. No people on the face of the globe are without a prevailing national religion. Magistrates have sought in many countries to strengthen civil government by an alliance with some particular religion, and an intolerant exclusion of all others. But those who have wielded this formidable power have rendered it a rival instead of an auxiliary to the public welfare—a fetter instead of a protection to the rights of conscience. With us it is wisely ordered that no one religion shall be established by law, but that all persons shall be left free in their choice and in their mode of worship. Still, *this is a Christian nation. Ninety-nine hundredths, if not a larger proportion of our whole population believe in the general doctrines of the Christian religion.* Our government depends for its being on the virtue of the people—on that virtue that has its foundation in the morality of the Christian religion ; and that religion is the common and prevailing faith of the people. There are, it is true, exceptions to this belief ; but general laws are not made for excepted cases. There are to be found, here and there, the world over, individuals who entertain opinions hostile to the common sense of mankind on subjects of honesty, humanity, and decency ; but it would be a kind of republicanism with which we are not acquainted in this country which would require the great mass of mankind to yield to and be governed by this few.

"'It is quite unnecessary to enter into a detailed review of all the evidences that Christianity is the common creed of this nation. We know it, and we feel it, as we know and feel any other unquestioned and admitted truth.'"

#### NEW JERSEY.

C. J. Baxter, superintendent of public instruction, Trenton, N. J., writes :—

"Many boards require the Bible to be read. A few do not. It is read in nearly all of the schools, and has been as far back as I can remember."

Bancroft writes :—

"The people (of New Jersey) rejoiced under the reign of God, confident that he would beautify the meek with salvation. The motto on the provincial seal was, 'Righteousness exalteth a nation.'"

With this early record it is not surprising to learn that the following rule is to be found in the school laws of the State of New Jersey, 1895, page 45, section 123 :—

"It shall not be lawful for any teacher, trustee, or trustees to introduce into or have performed in any school receiving its proportion of the public money any religious service, ceremony, or forms whatsoever, except reading the Bible and repeating the Lord's Prayer."

Jersey City has the following rule :—

"The principals of the several departments shall open their schools each morning by reading a portion of the Scriptures, without note or comment.

From 21 reports received, 19 state that the Bible is read in all the schools. Of this number, 12 cities have special laws requiring Bible reading. One report states that it is read in nearly all, and the other that only the Lord's Prayer is used.

The rule for the Hoboken schools is :—

*Rule LVII.*

"SEC. 81. The opening exercises of each department shall consist of the reading of a chapter out of the Bible (no comments to be made) and repeating the Lord's Prayer. During the above exercises the doors shall be kept closed and good order shall be observed."

*Rule LVIII.*

"SEC. 82. The opening exercises shall close at 9.15 a.m."

The Passaic rule is :

"At the opening of the morning session each day they shall read, or cause to be read, without comment, a selection from the Bible. This exercise may be accompanied by singing a hymn and repeating the Lord's Prayer."

In Long Branch City schools are opened with Bible reading and chanting the Lord's Prayer.

PENNSYLVANIA.

The Book of School Laws and Decisions for the State of Pennsylvania contains the following decisions, page 146, Nos. 114 and 115 :—

"114. The Scriptures come under the head of text-books, and they should not be omitted from the list.

"115. Sectarian works and all books of controversial or immoral tendency should be excluded. The common school is no place for controversy or the implanting of the habit of it either on religious or political subjects, much less for books or lectures of questionable morality."

In the report of the Superintendent of the State for the school year ending June 3, 1895, the total number of schools in the State is 18,019. The number in which the Bible is read is 15,780, or more than 87½ per cent.

Pennsylvania, taking advantage of this principle for the good of the schools, presents accurate reports upon the subject. Other States may wisely give this item a place in their reports in the interest of character building.

The rule for Bible reading in the schools of Philadelphia is as follows :—

"At the opening of each session of the schools at least ten verses of the Bible shall be read, without note or comment, to the pupils by the principal, or, in his or her absence, by one of the assistants. A suitable hymn may also be sung."

Of the 50 reports recently received from city and county superintendents in the State of Pennsylvania, 41 state that the Bible is read in all their schools, one in all but the primary, four that it is read in many of them, and five that it is not read at all.

These reports show also that Bible reading has been a custom from time immemorial in most of the schools. Only two state that it has never been read in them. Few report it as a modern custom three, five, ten, fifteen, twenty, and twenty-five years old. Many schools have special rules requiring the reading; some, the unwritten law of Christian community; others, custom, public sentiment, inclination of teachers, etc.

Maine, with her supreme court decision; Massachusetts, with her model State law; Rhode Island, with her watchfulness for the morality and virtue of teachers and pupils; New York, with her law forbidding the exclusion of the Scriptures; Pennsylvania, with her requirement that Bible reading should be reported by all teachers—these, and all the other States of the North Atlantic Division, are in accord with the great jurist, Rufus Choate, who declared :—

"We would have the Bible read not only for its authoritative revelations and its commands and exactions, obligatory yesterday, to-day, and forever, but for its English, for its literature, for its pathos, for its dim imagery, its sayings of consolation and wisdom and universal truth."



## SOUTH ATLANTIC DIVISION.

### DELAWARE.

Hon. C. C. Tindal, State superintendent of schools, Dover, Del., writes :—

“I think I am safe in saying that Bible reading at opening of school is well-nigh or quite universal in Delaware schools.”

A loyal spirit of confidence in Bible principles as essential to good citizenship has led her to honor the Scriptures from her earliest colonisation. One qualification to be possessed by every officer of the State, required by her first Constitution, was belief in the inspiration of the Holy Scriptures.

### MARYLAND.

The Superintendent of Schools, Baltimore, Md., writes as follows :—

“The Bible is read daily in our schools ; the Lord’s Prayer is also recited. I inclose a copy of the rule which has been in force for over thirty years :

“‘Each school, either collectively or in classes, shall be opened by the reading of a chapter or part of a chapter in the Holy Bible and the use of the Lord’s Prayer. The Douay version may be used separately by those pupils who prefer it.’”

The Bible has been read in all the schools in the city of Frederick for twenty years or more. Westminster has no Bible reading in her public schools.

### THE DISTRICT OF COLUMBIA.

On the subject of Bible reading and moral instruction the city of Washington has the following rule :—

“32. They (teachers) shall practice such discipline in their schools as would be exercised by a kind and judicious parent in the family—always firm and vigilant, but prudent. They shall endeavour on all proper occasions to inculcate in their pupils truthfulness, self-control, temperance, frugality, industry, obedience to parents, reverence for the aged, forbearance toward the weak, respect for the rights of others, politeness to all, kindness to animals, desire for knowledge, and obedience to the laws of God ; but no teacher shall exercise any sectarian influence in the schools.

“The opening exercises in every school shall consist of reading by the teacher, without note or comment, a portion of the Bible, repeating the Lord’s Prayer at the option of the teacher, and appropriate singing by the pupils.”

### VIRGINIA.

The following words of George Washington fittingly introduce the report received from his native State :—

“Of all the dispositions and habits which lead to political prosperity, religion and morality are indispensable supports. In vain would that man claim the tribute of patriotism who shall labor to subvert these great pillars of human happiness, these firmest props of the duties of men and citizens. The mere politician, equally with the pious man, ought to respect and to cherish them. A volume could not trace all their connection with public and private felicity. Let it simply be asked, Where is the security for property, for reputation, for life, if the sense of religious obligation desert the oaths which are the instruments of investigation in courts of justice ? And let us with caution indulge the supposition that morality can be maintained without religion. Whatever may be conceded to the influence of refined education on minds of peculiar structure, reason and experience both forbid us to expect that national morality can prevail in exclusion of religious principle. It is substantially true that virtue or morality is a necessary spring of popular government.”



Hon. John E. Massey, State superintendent of public instruction, Richmond, Va., writes that he believes the Bible to be read in nearly all the Virginia schools ; that this has been the custom since their organization.

Richmond reports the Bible as read in all her schools since their establishment. Manchester and Roanoke report fully observed rules requiring Bible reading. The rule in Roanoke specifies reading some portion of Scripture, the singing of a suitable hymn, and repeating the Lord's Prayer. No exposition allowed.

The Bible is read in all the schools of Staunton also. Two others report the custom as general, but not universal.

Perhaps the position of superintendent of schools in Virginia can not be more correctly expressed than by Bushrod Rust, Superintendent of Schools, Roanoke, Va. Mr. Rust writes :—

"I am strongly opposed to setting aside the dear old Bible as it stands for all the books in Christendom. \* \* \* I believe in having the entire work at hand, and in reading such selections as would 'establish our youth in habits of truth, purity, uprightness, unselfishness, and goodness.' I believe in being absolutely nonsectarian in and around our schools, and at the same time I would have all our teachers be godly men and women, exemplifying all the graces of the Christian character in their daily lives before the pupils. This would tend to the building of high character and good citizenship."

#### WEST VIRGINIA.

The secretary of the State department of free schools reports that the Bible has been read in part of the schools of the State since 1863. There is no State law on the subject of Bible reading in the public schools of West Virginia, but on April 6, 1898, her Supreme Court decided that such reading should not be excluded. Thirteen reports have been recently received, four from her cities. In two of these it is stated that the Bible is read in all of the schools every day. In the other two it is read at option of teachers, and has been since the organization of the schools. Of the eight county superintendents, four report Bible reading in all the schools of the county, excepting the high school in one county. Of the other four, one reports the Bible as read in 25 per cent. of the schools, saying that formerly teachers had done very little along that line, but at present the interest is increasing. A second, that the custom, although having been practiced for 25 or 30 years, is at present discontinued. The third states that it is read at the option of the teacher ; that for twelve years it was read in all the schools under a requirement made when the free-school system was organized.

#### NORTH CAROLINA.

Hon. John C. Scarborough, State superintendent of public instruction, Raleigh, N.C., writes :—

"In our town and city graded schools, supported by local taxes as a supplement to the fund regularly apportioned to the town or city, the Bible is generally read either in opening or at some other time, generally, however, at opening, the superintendent or principal in charge offering a short prayer or repeating the Lord's Prayer in concert with other teachers and pupils. \* \* \* There is no rule about it, except as the custom of reading the book makes it a rule."

Superintendent Scarborough states further :—

"The question of reading the Bible in the public schools of North Carolina has never been mooted or discussed in the State. Many public school teachers read it, and have it read, sometimes as a part of a short exercise at opening, sometimes as a reading lesson selected by the teacher, the whole school, or so many as can read, reading alternate verses or passages. It depends entirely on the inclination of the teacher in charge."

One county examiner writes that the Bible is read in about 50 per cent of the schools. That the custom has been growing for 20 years. Another

that the Bible is more generally read now than at any former time. The remaining five, from whom special reports are received, state that the Bible is read in all their schools.

#### **SOUTH CAROLINA.**

Hon. W. D. Mayfield, State superintendent of schools, Columbia, S.C., writes :—

“There is no law for or against reading from the Bible in our schools. Such teachers as desire to do so read from it as they may choose.”

Twelve officers report Bible reading under their jurisdiction. Nine of these state that it is read in all of their schools. It has been read in the schools of Charleston, the chief city of the State, for the last thirty-five years. Of the remaining five, two county superintendents state that the Bible is not generally read. A third, that the custom is quite common, but not universal, as it should be, and the fourth states that it has been generally read, but not regularly, for the last thirty-five years. The fifth that it is read in part of the schools.

Thomas S. Grimké, the South Carolina statesman and philosopher, wrote of the harmony of our civil institutions with the Bible as follows :—

“If ever a political scheme resembled the divine government it is ours, where each exists for the whole and the whole for each.”

#### **GEORGIA.**

Hon. G. R. Glenn, State school commissioner, Atlanta, Ga., writes :—

“Under our public school laws the Bible cannot be excluded from our schools. The teacher is left to use the Bible as she may see fit. I am glad to say that a great many of our teachers open the school with some sort of religious exercises, sometimes reading from the Bible.”

The Bible is read in large numbers of the public schools as far back as remembrance reaches. Of the 12 reports received from Georgia, six state that the Bible is read in all the schools, and the other six state that it is read in part of them.

#### **FLORIDA.**

Hon. William N. Sheats, State superintendent of public instruction, Tallahassee, Fla., writes :—

“No data published in regard to Bible reading in the schools. There is no law prohibiting it, and most Christian teachers read short lessons from the Bible, and open their schools with prayer daily.”

Of four reports received from other school officers, one states that Bible reading in all the schools has always been the custom under a school board rule requiring it. A second reports reading of Bible in the county schools. The other two state that while Bible reading may not be universal the practice is, and has been, generally observed in all their schools since organization. The rule for Bible reading adopted by the Board of Instruction for Osceola County is as follows :—

“SEC. XI. (p. 10). The reading of the Bible and short devotiona exercises of a non-sectarian character at the opening of the school are hereby encouraged. Also the reading occasionally of the Declaration of Rights as set forth by the constitution of the State of Florida and the Constitution of the United States.”

The South Atlantic Division has Bible reading generally in its schools. The largest cities observe the rule in all their schools.

**SOUTH CENTRAL DIVISION.**

**KENTUCKY.**

There is nothing in the law of Kentucky to enjoin or forbid the reading of the Bible in schools. The teaching of infidel or sectarian doctrine is forbidden.

Fourteen replies from county and city superintendents in this State give the following information : Eight of them report the Bible as read in all the schools under their supervision, the custom having been observed for twenty-five, thirty, or more years—ever since the organization of the schools. In one of them it has been the custom for three years only ; in another two years. Two of these schools have rules requiring Bible reading. In others it is optional. Louisville, Kentucky's largest city, has the Bible read in every school. There is a rule requiring such reading. Four others report that the Bible is read in part of the schools. Two report no Bible reading, the superintendent of one of which expresses deep regret that such is the fact.

**TENNESSEE.**

This State sends two reports, one of which assures us of Bible reading in all the schools since their organization. The superintendent writes :

“Should the Bible be removed from our schools I would not superintend or instruct in them. The Bible is our rock of public safety.”

The other superintendent reports Bible reading in part of the schools, and states that a rule will be made this summer requiring it of all teachers.

**ALABAMA.**

Five reports are received from Alabama. Three of them, including one from the capital of the State, report that Bible reading has been the custom in their schools since organization. The fourth has no data on the subject. The fifth states that Bible reading is not customary.

**MISSISSIPPI.**

The constitution of this State requires that the free enjoyment of all religious sentiments shall be held sacred.

“The rights hereby secured shall not be construed to justify acts of licentiousness injurious to morals or dangerous to the peace and safety of the State, or to exclude the Holy Bible from use in any public school of this State.”

(Of the two reports received, one states that the Lord's Prayer is used ; another that the Bible is read occasionally, and that vigorous efforts will be made to have “Readings from the Bible”\* introduced this fall.

**LOUISIANA.**

The constitution of Louisiana has several sections forbidding the connection of schools with any sectarian enterprises. The one report received from that State informs us that there is no local rule on the subject of Bible reading, and that the Bible has not been read during the last six years. From this report the custom of the schools of the State cannot be ascertained.

**TEXAS.**

Hon. J. M. Carlisle, State superintendent of public instruction, Austin, Tex., writes that the state department has not collected any special

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\* A book of selections from the Bible, prepared under the auspices of the Chicago Woman's Educational Union.

statistics on this subject. He regrets his inability to aid in the preparation of this report.

Seven local reports have been received. In Houston the Bible is read in all the schools under a law requiring such an exercise. One reports some Bible reading, but no system or regularity. Another states that the Bible is read in the third and fourth grades in course of ethical reading. The fourth writes that it is read regularly mornings in high schools, and has been since they were organized. The remaining three report no Bible reading. Two have no rule on the subject, and one of them has a prohibitory regulation.

#### ARKANSAS.

In the bill of rights of the State of Arkansas, amended in 1868, she directs her general assembly to \* \* \* "encourage schools, because 'religion, morality, and knowledge' are 'essential to good government,' " etc. The constitution of the State (1874) maintains free schools, because "intelligence and virtue are the safeguards of liberty." Hon. Junius Jordan, State superintendent of public instruction, Little Rock, Ark., writes that the State constitution has no rule on the subject of Bible reading; that the custom has been observed in part of the free schools for twenty-five or more years—ever since such schools were organized. Three other reports received state that the schools have no rule on the subject; that the Bible is read in part of them at option of the teacher.

### NORTH CENTRAL DIVISION.

#### OHIO.

The concluding sentence of the seventh section of the bill of rights in the present constitution of the State of Ohio is nearly identical with the article concerning schools in the ordinance of 1787, and by the general custom of Bible reading throughout the State this is indicated as the book from which the religion and morality required by the State is to be found.

Reports are received from 53 counties and cities in Ohio. Thirty-one of these state that the Bible is read in every school (29 of them report the custom as observed for many years, ever since the establishment of the schools, and for so long a time that "the memory of man runneth not to the contrary). In one instance it is reported as having been observed ten or fifteen years. One reports a rule on the subject. Three report an unwritten law favouring Bible reading. The request of the superintendent operates as law in another locality. Of the remaining 22, two have insufficient data, but believe that the Bible has been read for at least five years in all the schools. Another states that teachers are requested to read portions of the Bible regularly, and that most of them do. Four more state that most of the schools have Bible reading. Two more report reading in part of the rooms. Four others say that the Bible is not generally read in the schools under their care. Two report the reading only of the selections from the Bible found in their school readers. Two report very little, if any, Bible reading, and three report none.

One superintendent writes:—

"All our schools, from the first primary through the high school, have the Bible read, and a short prayer, or the Lord's Prayer repeated, accompanied by some appropriate song. We thoroughly believe in it, and we know that it has a good influence on our children."

#### INDIANA

Indiana has the following law on the subject (1865, p. 3, approved and in force March 6, 1865):—

"4493. *Bible*.—The Bible shall not be excluded from the public schools of the State. (167.)"

The following note is of interest in this connection :—

**“NOTE.**—The Bible, without note or comment, is installed in the common schools of Indiana. Its continuance as a moral class book in these nurseries of her future citizens will as surely mark the period of her prosperity and grace the zenith of her glory as its exclusion would prove the precursor of her decline, the herald of her shame.—(Mills, superintendent.)”

Reports received from 31 county and 26 city superintendents of schools are as follows :—Seven county and 11 city superintendents report that the Bible is read in all their schools. Twenty-four other school officers report that it is read in nearly all their schools. Three report no Bible reading. All the others report Bible reading at the option of teacher. Six of the city boards have rules concerning Bible reading, one of which we quote.

#### *Greensburg Rule.*

**“SEC. 3. Opening of the schools.**—The school shall be opened in the morning with reading of the Bible and prayer or singing, but the first shall in no case be omitted.”

Several superintendents of schools in Indiana are using the book *“Readings from the Bible,”* and like it very much.

#### ILLINOIS.

Hon. Samuel L. Inglis, State superintendent of public instruction, Springfield, Ill., writes :—

**“The constitution of the State neither requires nor forbids the reading of the Bible.”**

Of the 71 reports received from Illinois city and county public school superintendents, seven report Bible reading regularly in all their schools. Four more state in nearly all. Twenty-eight others write that it is read in part of their schools at the teacher's option. Twelve report no Bible reading. A few have written rules requiring Bible reading. Others observe an unwritten law, based on custom or the will of the teacher.

On the general subject of Bible reading one superintendent writes :—

**“All of our public schools have been opened daily with devotional exercises, and nearly all of our teachers' meetings have been opened with prayer.”**

Another :—

**“Teachers are requested to open morning sessions with appropriate songs, the reading of a Bible selection, and prayer. They are to make no comments in these or other school exercises of a sectarian character, but reverence for God and respect for holy things must be inculcated and enforced in every school.”**

#### MICHIGAN.

Of the 42 reports received from county and city superintendents in Michigan, 17 report the Bible read in all their schools ; five more report it as read in nearly all or quite generally ; 11 more as read in part of the schools ; nine report that the Bible is not read at present, but in three of these it was formerly read. The custom of Bible reading in Michigan dates back to the organization of the schools.

Detroit has adopted *“Readings from the Bible”* for use in her public schools.

In December, 1898, the Supreme Court of Michigan rendered a decision favorable to Bible reading in the public schools.

#### WISCONSIN.

Hon. J. Q. Emery, State superintendent of public schools, Madison,



Wis., in a circular letter dated April, 1896, to superintendents of schools, and town and district clerks, states—

“The Supreme Court has decided that sectarian instruction, within the meaning of the constitution, is instruction in religious doctrines which are believed in by some religious sects and rejected by others.”

Fifty-three reports have been received from city and county superintendents. All indicate a loyal observance of the construction placed upon the decision of the Supreme Court. A careful reading of this decision seems to show that the judges make an exception to the general rule of excluding the Bible, which would permit the use of some book of suitable Scripture selections. The passage referred to is found on page 17, section 5, in the pamphlet containing the decision of the Supreme Court of Wisconsin concerning the district board of school district No. 8 of the city of Edgerton. It is as follows :—

“Furthermore, there is much in the Bible which can not be justly characterized as sectarian. There can be no valid objection to the use of such matter in the secular instruction of the pupils. Much of it has great historical and literary value, which may be thus utilized without violating the constitutional prohibition. It may also be used to inculcate good morals—that is, our duties to each other—which may and ought to be inculcated by the district schools. No more complete code of morals exists than is contained in the New Testament, which reaffirms and emphasizes the moral obligations laid down in the Ten Commandments. Concerning the fundamental principles of moral ethics, the religious sects do not disagree.”

The following sentiment was prepared for the use of the Wisconsin school in their patriotic exercises in May, 1896 :—

“The best citizen, the best patriot, the best son of his country is he who gives the best manhood to his country. He is the man who writes upon his nature the Ten Commandments and the Nine Beatitudes.”

#### MINNESOTA.

Hon. W. W. Pendergast, State superintendent of public instruction, St. Paul, Minn., writes :—

“I have to some extent examined the book entitled ‘Readings from the Bible,’ and think the selections have been made with the greatest of care and the best of judgment.”

Three reports concerning Bible readings have been received from the Minnesota superintendents, in one of which it is said that the Bible is read in part of the schools, and two which report no reading.

The city of Minneapolis has adopted “Readings from the Bible” for use in her schools.

#### IOWA.

The school law of Iowa states (sec. 1764, p. 57) :—

“The Bible shall not be excluded from any school or institution in this State, nor shall any pupil be required to read it contrary to the wishes of his parent or guardian.”

Hon. Henry Sabin, superintendent of public instruction, Des Moines, Iowa, writes :—

“The great fault in the education of to-day is undoubtedly the tendency to crowd the intellect and to neglect nearly everything which tends toward moral training. I think the selections are most judiciously chosen, and that the book is well adapted to carry out the praiseworthy design. I cannot see how it can be objectionable to anyone who has the welfare of the children at heart.”

Twenty reports from county and city superintendents have been received. Seven report the Bible read daily in all their schools ; one states that it is



THE BOARD OF PUBLIC INSTRUCTION OF THE DISTRICT OF COLUMBIA  
DO HEREBY CERTIFY THAT THE FOLLOWING BOOKS ARE  
APPROVED FOR USE IN THE PUBLIC SCHOOLS OF THE DISTRICT  
OF COLUMBIA FOR THE YEAR 1907-1908.

BOOKS FOR THE FIRST GRADE.

BOOKS FOR THE SECOND GRADE.

BOOKS FOR THE THIRD GRADE.

BOOKS FOR THE FOURTH GRADE.

BOOKS FOR THE FIFTH GRADE.

BOOKS FOR THE SIXTH GRADE.

BOOKS FOR THE SEVENTH GRADE.

BOOKS FOR THE EIGHTH GRADE.

BOOKS FOR THE NINTH GRADE.

BOOKS FOR THE TENTH GRADE.

BOOKS FOR THE ELEVENTH GRADE.

BOOKS FOR THE TWELFTH GRADE.

APPROVED AND ADOPTED BY THE BOARD OF PUBLIC INSTRUCTION  
OF THE DISTRICT OF COLUMBIA, THIS 15TH DAY OF MARCH, 1907.

WILLIAM H. HARRIS,  
Superintendent of Schools.

THE BOARD OF PUBLIC INSTRUCTION OF THE DISTRICT OF COLUMBIA,  
DO HEREBY CERTIFY THAT THE FOLLOWING BOOKS ARE  
APPROVED FOR USE IN THE PUBLIC SCHOOLS OF THE DISTRICT  
OF COLUMBIA FOR THE YEAR 1907-1908.

THE BIBLE SHALL NOT BE DEEMED A SECTARIAN BOOK. IT SHALL NOT BE  
EXCLUDED FROM ANY PUBLIC SCHOOL. IT MAY, AT THE OPTION OF THE TEACHER, BE

read in school without sectarian comment, not to exceed ten minutes daily. No pupil shall be required to read it, nor to be present in the schoolroom during the reading thereof, contrary to the wishes of his parents, guardian, or other person having him in charge. Moral instruction, tending to impress upon the minds of the pupils the importance of truthfulness, temperance, purity, public spirit, patriotism, and respect for honest labor, obedience to parents, and due deference to old age shall be given by each teacher in the public schools."

One superintendent reports Bible reading in part of the schools.

The legislative provision for the establishment and maintenance of schools is founded upon the fact of the necessity of a high degree of intelligence, patriotism, integrity, and morality on the part of every voter in a government by the people.

The superintendent understands that in order to secure the highest educational results in children, parents must be in intelligent co-operation with all efforts to improve the pupils. Hence, June 26, 1896, was designated as parents' day, to be observed throughout the State.

"The exercises upon that day consisted of select songs, recitations, essays, dialogues bearing upon home life, its beauties and duties, the child in the home, the mother, the father, the family. \* \* \* The home is the unit of government, and for the perpetuity of holy home life, and for the right education of the children of those homes our nation was established and our public-school system is maintained."

#### SOUTH DAKOTA.

Hon. George N. Parker, deputy superintendent of public instruction Pierre, S. Dak., writes :—

"We send you a copy of the school law of 1891, on page 44 of which you will find all the law we have upon the reading of the Bible in the public schools \* \* \* We have examined the publication ('Readings from the Bible') you mention, and we are much pleased with it."

[South Dakota School Law, p. 44, sec. 18.]

"No sectarian doctrine shall be taught or inculcated in any of the schools of the corporation, but the Bible, without sectarian comment, may be read therein."

Thirteen reports are received from city and county superintendents of South Dakota : five report that the Bible is read in all the schools and eight that it is read in part of them. The State law is the only rule on the subject.

#### NEBRASKA.

Hon. H. R. Corbitt, State superintendent of schools, Lincoln, Nebr., writes :—

"The State of Nebraska has by its laws and the regulations of the department of education always encouraged moral culture in its public educational system. The Bible is generally read in our schools. I have, however, no carefully compiled data showing the exact extent or nature of the efforts in this direction.

"I have examined the book entitled 'Readings from the Bible,' and regard it as one of the most important educational publications of recent times. It will certainly facilitate the introduction of Scripture reading into many schools where such exercises have heretofore been impossible."

From the 28 reports received from city and county superintendents, 13 state that the Bible is read in all the schools ; two more have not complete data, but believe it to be read in most of their schools. Generally speaking, writes one, the Bible is read throughout the county. One states that it is read in nearly all of the schools, eight report Bible reading in part of them—in some counties more in some less. The Bible has held an honored place in the educational system of Nebraska since the organization of their schools.

One superintendent of schools answers the questions in regard to Bible reading in the negative. She writes :—

“I read these questions aloud to our teachers in attendance at the institute, and I think if you ask us the same questions next year I can answer yes.”

Another speaks of introducing “Bible Readings” into his school during the coming year.

Another writes ---

“I have examined ‘Readings from the Bible’ with much care and interest in view of the discussion now going on along this line, and I must certainly say that it seems to me the work undertaken and presented in this little volume has been admirably done.”

#### KANSAS.

Hon. E. Stanley, State superintendent of public instruction, Topeka, Kans., writes :—

“We have but little law bearing on the subject of Bible or moral instruction in the common schools of the State. \* \* \* I like your little book, ‘Readings from the Bible,’ selected for schools, very much. I think the selections are very well chosen.”

Thirty-four reports from county and city superintendents on the subject of Bible reading have been received. Seven state that the Bible is read in the opening exercises of all their schools, another thinks this is done, two more report Bible reading in most of the schools, and two report such reading in many. Seven report Bible reading in part of their schools, and five report it as not being read. The custom of Bible reading has been general since the schools were organized. Three superintendents report school laws on the subject. Others say custom is the law in their localities.

### THE WESTERN DIVISION.

#### MONTANA.

Hon. E. A. Steere, State superintendent of public instruction, Helena, Mont., states that there is no rule in the constitution of Montana concerning the Bible ; that it is read in a few of the schools. He expresses his approbation of “Readings from the Bible” as follows : “I am highly pleased with its contents.”

A report from a local superintendent in Montana states that the Bible is not read in his schools.

#### WYOMING.

Hon. Estelle Reece, State superintendent of public instruction, Cheyenne, Wyo., writes :—

“There is no provision whatever in the Wyoming school laws relative to the matter [Bible reading], it being left entirely to local school boards, or in almost all cases to the individual teachers. \* \* \* I have examined the copy of ‘Readings from the Bible’ sent me and like it very much.”

Eight reports from county and city superintendents are received. One states that the Bible is read in all schools ; another that some teachers read it regularly ; a third that it is occasionally read ; one expresses sorrow that the custom is not universal ; one states that in the primary grade portions of the Bible are learned and repeated : another reports no Bible reading at present, but writes that it was formerly read ; two report no Bible reading.

#### COLORADO.

Hon. A. J. Peavey, State superintendent of public instruction, Denver Colo., writes :—

“Have examined the ‘Bible Readings’ and consider it very valuable. We have no statistics about Bible reading.”

Twenty-four reports from city and county superintendents have been received. Four of these state that the Bible is read in all their schools ; 11 report reading in part of the schools ; nine report no reading. One of these superintendents expects to put "Readings from the Bible" into all the schools of his county this coming year. Another suggests the use of it for supplementary reading. One writes as follows :—

"I am in happy accord with the movement, and hope to see Bible reading practised for morning exercises in all our schools of this county. I shall take pleasure in directing the attention of the institute to this very important subject."

#### UTAH.

Hon. John R. Park, State superintendent of public instruction, Salt Lake City, Utah, writes :—

"While morality is taught and inculcated in all of the public schools of this State, the Bible is not read in any of them. The belief seems to be quite widespread here that moral teaching in the public schools should be wholly nonsectarian, and many believe it to be impossible to introduce the Bible into the schools without at the same time removing one of the strongest safeguards against sectarianism."

Eight reports from city and county superintendents verify the information contained in Mr. Park's letter. One of them states that the Bible had been read at option of teacher for twenty years, until 1896. Another that it had been read for thirty-eight years, ending in 1885.

#### NEVADA.

Hon. H. C. Cutting, State superintendent of public instruction, Carson City, Nev., writes :—

"Although there is not one school in the State where the Bible is read, efforts at moral training are made in all."

Two reports received from local superintendents are in harmony with that of the State superintendent.

#### IDAHO.

Hon. C. A. Forseman, State superintendent of public instruction, Boise City, Idaho, writes :—

"Our school law prohibits any reading of the Bible, or at least that is the recognised construction."

Eight county superintendents verify the report of their chief.

#### WASHINGTON.

Hon. C. W. Bean, State superintendent of public instruction, Olympia, Wash., forwards a copy of the Attorney-General's opinion regarding the reading of the Bible in the public schools of the State, dated September 19, 1891. Four reports from county superintendents are received. Each states that the Bible is not read being under ban of Attorney-General's ruling. Two state that it was read in their schools previous to 1891. One writes :—

"I believe the day will come when the Bible may be read and taught."

#### OREGON.

Hon. G. M. Irwin, State superintendent of public instruction, Salem, Oreg., writes that the Bible is not generally read in the schools of the State. Ten reports are received from county superintendents ; four state that there is no Bible reading in their counties ; the others say that it is read in a few schools in each of their counties. There is no rule in Oregon prohibiting the reading of the Bible, and in some schools it is reported to have been read for forty-eight years.

CALIFORNIA.

Hon. Samuel T. Black, State superintendent of public instruction, Sacramento, Cal., refers the questions relating to Bible reading in the schools to the county superintendents of his State. Twenty-six replies to these questions have been received ; 19 of these report no Bible reading ; six understand section 8 of Article IX. of the constitution 1879 to be opposed to such reading ; seven report Bible reading in part of the schools ; one writes that it is read for its literary value, stating that many of its stories are required to be told and read in course of study.

One superintendent writes as follows :—

“ I am much pleased that something is being done in this direction. I have read the notices that have appeared, from time to time, in the papers with reference to the preparation of a book of extracts from the Bible. I shall surely try to have it introduced into our schools.”

*Superintendents of public schools reporting in the summer of 1896 Bible reading in all, in part, or in none of their schools.*

	Superintendents reporting Bible reading—			Total reports received.
	In all their schools.	In part of their schools.	In none of their schools.	
North Atlantic Division :				
Maine . . . . .	14	1	—	15
New Hampshire . . . . .	15	1	—	16
Vermont . . . . .	2	2	—	4
Massachusetts . . . . .	100	—	—	100
Rhode Island . . . . .	6	5	—	11
Connecticut . . . . .	8	1	—	9
New York . . . . .	53	16	14	83
New Jersey . . . . .	21	1	—	22
Pennsylvania . . . . .	41	5	4	50
South Atlantic Division :				
Delaware . . . . .	1	—	—	1
Maryland . . . . .	2	—	1	3
District of Columbia . . . . .	1	—	—	1
Virginia . . . . .	4	4	—	8
West Virginia . . . . .	6	4	2	12
North Carolina . . . . .	6	1	—	7
South Carolina . . . . .	10	3	1	14
Georgia . . . . .	6	5	—	11
Florida . . . . .	1	3	—	4
South Central Division :				
Kentucky . . . . .	9	6	2	17
Tennessee . . . . .	1	1	—	2
Alabama . . . . .	3	1	1	5
Mississippi . . . . .	—	1	1	2
Louisiana . . . . .	—	—	1	1
Texas . . . . .	2	2	4	8
Arkansas . . . . .	—	3	—	3
North Central Division :				
Ohio . . . . .	33	15	5	53
Indiana . . . . .	15	10	3	28
Illinois . . . . .	27	33	11	71
Michigan . . . . .	18	96	11	125
Wisconsin . . . . .	—	—	53	53
Minnesota . . . . .	—	1	2	3
Iowa . . . . .	8	11	1	20
Missouri . . . . .	1	1	—	2
North Dakota . . . . .	1	1	—	2
South Dakota . . . . .	5	8	—	13
Nebraska . . . . .	13	12	5	30
Kansas . . . . .	17	12	5	34
Western Division :				
Montana . . . . .	—	1	1	2
Wyoming . . . . .	1	3	4	8
Colorado . . . . .	3	12	9	24
Utah . . . . .	—	—	8	8
Nevada . . . . .	—	—	2	2
Idaho . . . . .	—	—	8	8
Washington . . . . .	—	—	15	15
Oregon . . . . .	—	6	4	10
California . . . . .	—	7	19	26
Total United States . . . . .	454	295	197	946

Reports of State superintendents are not included above. Superintendents having "no data" are not counted. Three-fourths of superintendents report Bible reading in part or all of the schools under their supervision. The recapitulated laws of nine States concerning Bible reading in schools are as follows :—

"*Massachusetts*.—The school committee shall require the daily reading in the public schools of some portion of the Bible, without written note or oral comment, etc."

"*Pennsylvania, Decision No. 114*.—The Scriptures come under the head of text-books, and they should not be omitted from the list."

"*New Jersey*.—It shall not be lawful for any teacher, trustee, or trustees to introduce into or have performed in any school receiving its proportion of the public money, any religious service, ceremony, or forms whatsoever, except reading the Bible and repeating the Lord's Prayer."

"*Georgia*.—The county board of education shall prescribe from time to time what text-books and books of reference shall be used in the common schools of the county ; provided the Bible shall not be excluded from the common or public schools of the State."

"*Mississippi*.—The constitution of this State requires that the free enjoyment of all religious sentiments shall be held sacred. 'The rights hereby secured shall not be construed to justify acts of licentiousness injurious to morals or dangerous to the peace and safety of the State, or to exclude the Holy Bible from use in any public school of this State.'"

"*Indiana*.—The Bible shall not be excluded from the public schools of the State."

"*Iowa*.—The Bible shall not be excluded from any school or institution of this State, nor shall any pupil be required to read it contrary to the wishes of his parent or guardian."

"*North Dakota*.—The Bible shall not be deemed a sectarian book. It shall not be excluded from any public school, etc."

"*South Dakota*.—No sectarian doctrine shall be taught or inculcated in any of the schools of the corporation ; but the Bible, without any sectarian comment, may be read therein."



## APPENDIX I

### HARVARD UNIVERSITY — OFFICERS AND FACULTY FOR RELIGIOUS WEEKLY SERVICES AND FELLOWSHIP\*

#### 1. THE UNIVERSITY CHAPLAIN

Frederic C. Johnson, D.D., Plummer Professor of Christian Ministry

William Brewster, D.D., LL.D.

Charles C. Johnson, D.D.

Frederic C. Johnson, D.D., LL.D.

Frederic C. Johnson, D.D., LL.D.

Frederic C. Johnson, D.D., LL.D.

President of the University for  
the year 1900-1901

There have also served on this Board of Preachers since its organization in 1896.

Edward Everett Hale, D.D.

Frederic C. Johnson, D.D.

Frederic C. Johnson, D.D.

George A. Gordon, D.D.

Frederic C. Johnson, D.D.

William Lawrence, D.D.

Frederic C. Johnson, D.D.

Henry Van Dyke, D.D.

Frederic C. Johnson, D.D.

Charles C. Johnson, D.D.

Washington Gladden, D.D.

Frederic C. Johnson, D.D.

J. Edwin Carpenter, D.D.

E. Winchester Johnson, D.D.

Frederic C. Johnson, D.D.

Frederic C. Johnson, D.D.

Frederic C. Johnson, D.D.

Frederic C. Johnson, D.D.

Frederic C. Johnson, D.D.

Frederic C. Johnson, D.D.

Frederic C. Johnson, D.D.

Frederic C. Johnson, D.D.

Frederic C. Johnson, D.D.

Frederic C. Johnson, D.D.

On May 10, 1896, a vote was passed by the President and Fellows — "that the preachers to the University be annually appointed by the President and Fellows with the concurrence of the Board of Overseers, who in conjunction with the Plummer Professor of Christian Ministry shall arrange and conduct the religious services of the University." The Board of Overseers concurred in this vote on May 12, 1896, and in 1902 it was incorporated in the Statutes of the University. On June 14, 1900, on the unanimous recommendation of the Preachers and the Plummer Professor, the President and Fellows voted: "That the Statute No. 13, concerning religious exercises, be amended by striking out the clause 'at which the attendance of the students is required';" and on June 16 the Board of Overseers concurred in this vote. Attendance at the religious services of the University was thus, by the advice of those who conduct these services, made wholly voluntary.

Under this voluntary system religion is now regarded in the University, not as a part of College discipline and compulsion, but as a privilege and opportunity. The Preachers to the University represent various Christian communities and various parts of the country. Each member of the staff conducts daily morning prayer for a term of three weeks in the first half-year, and a second term of three weeks in the second half-year, and each preaches on four Sunday evenings. The Preacher conducting morning prayers is in attendance for some hours every morning, during his term of duty, at the Preacher's Room, for the express purpose of meeting such students as desire to consult him. Thus, for six weeks of the year each Preacher is a College Pastor, and sets at the disposal of students more of

\* Pamphlet issued by Harvard University, July, 1900.

his time than most ministers find possible to give to such service in their own parishes. These personal intimacies of the Preacher's Room are regarded by the Preachers as among the most important part of their service. On Thursday afternoons, from November till May, Vesper Services are held in the University Chapel, with a brief address from one of the Preachers, and with music by the College Choir, a full male chorus of 25 sopranos and altos, and 16 tenors and basses. The University service on Sunday is held in the evening, with the intention of encouraging students to associate themselves in the morning with the life of a Parish church. Seats are provided for students at the expense of the College in the neighbouring churches of Cambridge as follows :--

First Church (Unitarian).  
Christ Church (Protestant Episcopal).  
First Church (Congregational).  
Old Cambridge Baptist Church.  
Epworth Methodist Episcopal Church.  
St. Paul's Church (Catholic).

On one-third of the Sunday evenings of the year the University service is conducted by other preachers of various communions through invitation of the Board of Preachers. The following preachers thus conducted services during the year 1899-1900 :—

Rev. Pres. W. H. P. Faunce, D.D., of Providence, R.I.  
Rev. Charles H. Eaton, D.D., of New York, N.Y.  
Rev. Edward Everett Hale, D.D., of Boston.  
Rev. Frederick Palmer, of Andover, Mass.  
Rev. Charles William Stubbs, D.D., of Ely, England.  
Rev. E. Winchester Donald, D.D., of Boston.  
Rev. Washington Gladden, D.D., of Columbus, O.  
Rabbi Dr. Emil G. Hirsch, of Chicago, Ill.  
Rev. M. D. Babcock, D.D., of New York, N.Y.  
Bishop John Heyl Vincent, D.D., of Topeka, Kans.  
Rev. W. I. Rainsford, D.D., of New York, N.Y.  
Rev. Charles Hargrove, M.A., of Leeds, England.  
Rev. Newman Smyth, D.D., of New Haven, Conn.

The report of the President of the University for the year 1895-96 sums up the result of ten years of voluntary Chapel as follows :—

“It is now ten years since the introduction of the present method of promoting the religious interests of the University and conducting its chapel services. The system adopted in 1886 had two principal features : first, the employment every year of five ministers, who in conjunction with the Plummer Professor conduct morning prayers from Monday to Saturday inclusive, an evening service on every Sunday in term time, and an afternoon service on Thursdays from November till April ; and secondly, the offer of the services of one of these six ministers every day in the week to all students of the University for consultation on the ethical or religious topic which is interesting them. Both these branches of the ministers' work have succeeded in a high degree. The services on Sunday evenings and Thursday afternoons are largely attended ; and morning prayers at quarter before nine o'clock are attended in a satisfactory way, although by varying numbers and never by a large proportion of the total body of students in Cambridge. An attendance of two hundred at morning prayers is considered good ; and in very bad weather, especially on Monday mornings, the attendance occasionally descends to sixty or seventy persons. All the services now held in Appleton Chapel are strictly devotional in method and in spirit. No one attends any of them except from the conviction that it is good for him to be there. It is perfectly understood among both Faculty and students that no record is kept of attendance at the Chapel, and that no gain of any sort can result from attendance except the satisfaction of a religious need. The congregation is a shifting one from morning to morning, and from week to week, —although, of course, some students and some officers go to Chapel habitually. In ten years this has

been no sign of diminishing interest in the Chapel exercises, but, on the contrary, there has been manifested a growing interest.

In seeking the reasons for the success of this purely optional method in a community of young men at a time of life which, on the whole, is not in common estimation religiously inclined, the first cause which comes to mind is the quality of the preachers themselves who in successive years have had charge of the work. These ministers have been, and need to be, more than usually capable as preachers. They need to be simple, direct, and really, but also full of religious enthusiasm and of intellectual resource. The variety of preachers is one of the advantages of the method. The preachers have come from various denominations and localities; and they have been men of varied professional training and experience. A rule observed at all Chapel exercises and thought to be one cause of their success is the complete exclusion from the Chapel of all matters irrelevant to the occasion. Like University notices, or the introduction of distinguished visitors. Again a time limit is strictly observed at all services. Morning prayers occupy fourteen minutes in all, and the vesper service from thirty-five to forty minutes; and the congregation can count on the observance of these limits. The designation hours of the preachers successively on duty serve to attract them to many young men and many young men in the preachers, and on the part of the students this interest is manifested by going to Chapel exercises and carrying their friends thither."

Parents and friends of young men coming to the University are urged to counsel them to take part in its religious life. Under the voluntary system now accepted in Harvard University, the further development of such interests must proceed chiefly from the influence of the students' homes, and all who are in sympathy with such an undertaking are requested to co-operate with the Preachers to the University.

The Board of Preachers will be glad to have their attention called to any cases of special need where they may be useful, or to any better methods of serving the moral and religious interests of the University. General correspondence should be addressed to the Plummer Professor, though any Preacher will gladly consider such questions as may be more appropriately addressed to him.

Pastors of churches and teachers of schools are especially requested to make known to the Board of Preachers their young friends or pupils who may need help or who are likely to be of help in the work with which the Preachers are charged.

## 2. PHILLIPS BROOKS HOUSE.

The House erected as a Memorial of Phillips Brooks was dedicated on January 23, 1901, and provides an important reinforcement of the religious life of the University. Phillips Brooks House was originally designed to extend and unite many scattered undertakings of religion and philanthropy in the University. It was to represent, as the first appeal for such a building stated, "one more step in the comprehensive plan of religious work of which the establishment of the Board of Preachers was the first step." No memorial, however, of the generous-minded Phillips Brooks could be designed to separate religion from daily life. Phillips Brooks House is a centre for the social and charitable activities of the University as well as for religious meetings, a kind of Parish House connected with the administration of the College Chapel. The tablet which is to stand in its vestibule will accurately describe its purpose:—

THIS HOUSE IS DEDICATED TO  
PIETY, CHARITY, PHILANTHROPY,  
IN GRATEFUL MEMORY OF  
PHILLIPS BROOKS.

The second and a part of the third floor of the House are expressly arranged for the work of the various Religious Societies. On the third floor

is a large meeting room, named in memory of the beloved Professor Andrew P. Peabody, Peabody Hall ; a part of the first floor is assigned to the charities directed by students ; a study is provided for students who desire a quieter resort than the crowded reading-rooms of the Library ; and the " Brooks Parlor " is arranged as a dignified place for receptions and meetings. Phillips Brooks House recognises the inevitable differences of religious affiliation, and makes room for all such associations under one roof, and in close relation with the practical generosity and social fellowship of the University. It is intended, from time to time, to unite these religious forces in general meetings, representing the whole religious life of the University, and conducted by a representative Student Committee. The first of these meetings was held in Peabody Hall in March 1900, and addressed by the Rev. W. I. Rainsford, D.D., of New York. The uses to which Phillips Brooks House has already been put may be indicated by the following table, compiled for the first month of its general occupation :—

APPROXIMATE USE OF PHILLIPS BROOKS HOUSE DURING MARCH, 1900.

	Meetings.	Average Attendance.	Total Attendance.
Brooks Parlor, open daily . . . . .	15 days	31	465
Study, open daily . . . . .	27 "	15	405
Y. M. C. A. : Reading Room, open daily . . . . .	27 "	50	1,350
Y. M. C. A. : Bible Class . . . . .	9	14	131
Y. M. C. A. : Devotional Service . . . . .	4	30	122
St. Paul's Society : Evening Prayers . . . . .	12	9	108
St. Paul's Society : Devotional Service . . . . .	4	22	88
Catholic Club . . . . .	2	51	103
Religious Union . . . . .	2	18	37
Student Volunteer Committee : office-hours . . . . .	3		
Harvard Engineering Society . . . . .	1	60	60
Ladies' Faculty Teas . . . . .	5	105	525
Canadian Club . . . . .	1	69	69
Noble Lectures . . . . .	4	267	1,070
Camera Club . . . . .	1	18	18
Exeter Club . . . . .	1	25	25
Semitic Conference . . . . .	1	70	70
Memorial Society . . . . .	1	20	20
Administrative Committee . . . . .	2	5	10
Conference on Boys' Clubs . . . . .	2	28	57
Total meetings . . . . .	55	45	2,513
Daily use of House . . . . .	27 days.	175	4,733

### 3. THE RELIGIOUS SOCIETIES.

Four Religious Societies are in active operation in the University and invite to their fellowship young men of widely different convictions. In one or another of the organisations any student of the University with religious interests should find sympathy and companionship. The special methods and activities of these societies are as follows :—

#### THE YOUNG MEN'S CHRISTIAN ASSOCIATION.

(SOCIETY OF CHRISTIAN BROTHERN. FOUNDED 1802.)

The purpose of this Association is to unite such students of the University as are connected with evangelical Churches in Christian fellowship and in active Christian work. It attempts to cultivate both character and service,—a Christian standard of personal life and a practical service of

the modern world. The Association occupies convenient rooms in Phillips Brooks House, excellently equipped by the kindness of friends with books and periodicals. The Reading Room of the Association is known as the Shepard Room, in memory of Ralph Hamilton Shepard of the Class of 1893, who at his death in 1894 bequeathed \$5,000, for "Christian work at Harvard." A tablet in the vestibule of Phillips Brooks House is to bear the name of this young graduate and to describe him as "studious, modest, devout." The family of Ralph Shepard propose to supply the rooms of the Association with worthy furnishings as a further memorial, and have added to the general fund which bears his name the sum of \$10,000.

The various departments of the work of the Association are as follows :—

Devotional meetings are held every Wednesday evening at 6.45, for three-quarters of an hour. All of these meetings are open to all members of the University, who are cordially invited to attend. In the Bible Study Department four courses have been offered during the year 1899–1900 :—

- I. Studies in the Life of Christ. Dr. A. C. Garrett (Instructor).
- II. Studies in the Acts and Epistles. W. M. Crane, 1902.
- III. Studies in the Old Testament Characters. Geo. L. Paine, '96 at present in Cambridge Theological School).
- IV. The Gospel by John. Geo. S. Budd, 1 Gr.

Over fifty men have enrolled in these courses.

The City Mission Department sends a dozen or more men every Sunday afternoon to teach in the Beacon Hill Chinese Sunday School. Members of the Association conduct religious meetings each Tuesday evening throughout the year at the Boston Industrial Home. About twenty men are engaged in connection with the T-wharf Reading Room which the Association conducts for the fishermen of Boston. Members of the Association serve in the Boston Settlements, in the Boston and Cambridge churches, and in boys' clubs and missions. In the year 1900–01, in addition to its present work, the Association will conduct a Boys' Club in East Cambridge and do friendly visiting under the direction of the Cambridge Associated Charities. The Association contributes to the support of a Harvard graduate, a missionary in India.

At the beginning of the College year the Association endeavours to be of service to incoming students. For this purpose handbooks containing detailed information about the religious societies, and the athletic, literary and social interests of the student body, are sent during the summer to members of the incoming Freshman class.

The rooms of the Association in Phillips Brooks House are the headquarters of an information bureau and reception committee, which assists many new students in finding lodgings and employment and aids them in the selection of their courses. On the first Friday of the year a reception is offered to new students.

The Association employs a General Secretary who has supervision of its work.

### THE ST. PAUL'S SOCIETY.

(FOUNDED 1861.)

The St. Paul's Society was founded in 1861 by undergraduates connected with the Protestant Episcopal church, with the object of interesting all who in any way have any affinity with that church and who feel the need of association under that influence.

The objects of the Society are thus stated in the Constitution :—"To bring the Episcopal students of the University into acquaintance with each other; to afford them opportunities of uniting in worship agreeably to the spirit and forms of their church, of giving each other counsel and support in the performance of Christian duties, and of undertaking missionary work, and maintaining a Library to give them convenient access to religious literature. Any member of the University who has been baptized and who attends the Protestant Episcopal Church shall be eligible for membership."



The Society now occupies attractive rooms in Phillips Brooks House which through the aid of graduates have been fitted up in a way consistent with the purpose for which the Society was founded. The Society holds weekly devotional meetings on Wednesday at 7 p.m. With the exception of the monthly business meetings a clergyman or prominent layman is present and speaks. In Lent the Right Reverend Leighton Coleman, Bishop of Delaware, preached a sermon in Christ Church under the auspices of the St. Paul's Society. Evening prayer has been read daily in Advent and Lent by one of the members of the Society and in Holy Week morning service was conducted by the Rev. Wm. B. King, Rector of Christ Church, Cambridge, in the Society's rooms. Besides the religious work the members of the Society have charge of the Boys' Club at the Church of the Ascension under the direction of Rev. Edward L. Atkinson. On one evening in the week they entertain over one hundred boys. Many of the men teach in Sunday Schools in the neighbourhood, and others have undertaken charity work in connection with the Student Volunteer Committee. There is also a Harvard Chapter of the Brotherhood of St. Andrew composed of St. Paul's Society members.

The Society endeavors to make all Churchmen of the University feel that they are welcome. The Society is also anxious to receive the names of Churchmen entering the University. Such names should be sent to the Secretary, Phillips Brooks House, and will receive cordial attention.

#### HARVARD RELIGIOUS UNION.

The purpose of this Society is "to unite men of various views and faiths in a mutual interchange of religious thought and a common search for truth; to develop and impress the idea of the value of the religious element in character and action, and thus to increase in its members that ethical enthusiasm and purpose which is the result alike of intellectual breadth and moral earnestness."

The Union meets every other Monday evening at 7.30, in its rooms in Phillips Brooks House. These rooms, through the kindness of friends, have been attractively arranged, and offer opportunities for reading and writing as well as for general meetings. All members of the University are welcomed. The organisation embraces men of many differing communions, and encourages plain and straightforward discussion.

Among the speakers who have given addresses during the year 1899-1900 are the following :—

Professor Peabody and President Tucker, "Moral Leadership."  
Rev. Paul Revere Frothingham, "Martineau."  
Col. T. W. Higginson, "Reminiscences of the Transcendentalists."  
Professor C. E. Norton, "Religion and the Creeds."  
Rev. S. M. Crothers, "Religious Teaching of Wordsworth's Poetry."  
Rev. Robert MacDonald, "Training of the Moral Leader."

#### THE CATHOLIC CLUB.

In the winter of 1892-93 a Committee of Catholic Students from the various departments of the University met and unanimously agreed that some sort of union among the Catholics of Harvard was desirable. Accordingly in May, 1893, the Harvard Catholic Club was organised. The membership is open to all Catholics in Harvard University. The purpose of the Catholic Club is twofold: First, to promote the religious interests of the Catholic students of Harvard, to assist in every way possible Catholic young men who propose coming to Harvard, and to receive them upon their admission. Secondly, to quicken the spirit of Christianity among the students.

The Club occupies a large and well-equipped room in Phillips Brooks House, maintains there a small library of Catholic books and periodicals, and holds both private conferences directed by some representative of



Catholic opinion, and public meetings in the interest of the whole University, addressed by distinguished clergymen and laymen. Among the public meetings held during the year 1899-1900 were the following:—

A lecture on "Dry rot in Literature," an explanation of the influence on modern literature of three philosophical errors, agnosticism, naturalism and pessimism, by Rev. J. T. Smith, of New York. A lecture on Christian Economics by Rev. Francis Ryan, of Toronto.

#### MEETING OF FRIENDS.

A meeting of the Society of Friends is held every Wednesday evening at 8 o'clock in a private house, 102, Avon Hill Street. Students who are members of the Society or are interested in it are invited to attend.

### 4. AUXILIARY ORGANISATIONS.

#### COMMITTEE ON THE RECEPTION OF STUDENTS.

This Committee, appointed by the Faculty of Arts and Sciences, aids new students in the selection of rooms and the choice of places where they may obtain table board, as well as in all other matters connected with the first steps of their life in Cambridge. The members of this Committee will be glad to meet new comers on the days of entrance examinations both in June and in September, at their office in Sever Hall, or at room No. 1, Wadsworth House. The Committee also arranges a general meeting of welcome on the first Monday of the term, at which new students are greeted by the President of the University and by other persons representing both College and civil life. During the winter months, under the direction of this Committee, a series of "Faculty Teas" is given by ladies connected with the Faculty in Phillips Brooks House, at which officers and students are informally received and made known to each other. It is proposed by the Committee, during the year 1900-01, to offer a course of lectures describing the social, physical and historical environment of the University. A large auxiliary committee of students assists in many of these undertakings and endeavours to give cordiality and naturalness to College life.

#### THE STUDENT VOLUNTEER COMMITTEE.

During the year 1894-95 the charitable work undertaken by students of the University was thoroughly organized. This undertaking was begun by a movement of the united religious societies. On October 19, 1894, a meeting was held in Sanders Theatre, at which President Eliot presided, and the Presidents of the Catholic Club, the St. Paul's Society, the Christian Association, the Oxford Club, and the Religious Union, all pledged the support of their societies to the new enterprise. Catholics and Protestants, Unitarians and Evangelicals stood on a common platform in a common humane enterprise. It was a practical religious union among College men, which, as President Eliot said in his opening words, "is probably without parallel in the history of education." The undertaking is in the hands of a student committee, together with an Advisory Board of professors, graduates, and other persons prominent in charity work. Mr. Charles W. Birtwell, Secretary of the Boston Children's Aid Society, was at the beginning chosen Director, and has ever since served in that capacity. During the year 1899-1900 Mr. Birtwell was prevented by illness from service, and his place was taken by Mr. Robert A. Woods, Head of the South End House in Boston, who has directed the affairs of the Committee with generosity and wisdom.

By vote of the Trustees of the bequest of Miss Belinda L. Randall of Boston, in 1898, \$15,000 was given to the President and Fellows of Harvard College "for the encouragement and maintenance among the students of the University of practical education and training in philanthropic service; \$10,000 of this sum to be applied to the construction of the Phillips Brooks House, to ensure in that building suitable accommodations for the charitable

work of the organization known as the Student Volunteer Committee, so long as said organization shall retain the approval of the President and Fellows, or in case this work should be given up, for kindred work at the discretion of said President and Fellows, and \$5,000 to be held and invested by said President and Fellows of Harvard College as a permanent fund to be known as the John W. and Belinda L. Randall Fund, its income only to be applied to the maintenance or in the interest of said philanthropic activity on the part of the students of the University, or in case this should be given up, to be applied by said President and Fellows to kindred purposes." The Student Volunteer Committee is thus assured of a suitable equipment for its activities, and of a permanent character for its work.

The Director holds office hours in Phillips Brooks House on Tuesday and Friday mornings. Here he consults with men—both as individuals and as groups—taking into account the student's tastes, his intended business or profession, and the time at his disposal, and he advises from time to time those who are actually at work. Thus the office is a kind of clearing-house of philanthropy, receiving applications from young men who wish to serve, and receiving on the other hand applications from charitable institutions, and then adjusting the work to the man and the man to the work. Students have served as volunteer visitors in poor families in connection with the Associated Charities of Boston and the Associated Charities of Cambridge. For the Children's Aid Society men have superintended "Home Libraries." Boys' Clubs in Boston and Cambridge have been carried on by students in connection with Emmanuel House, the Epworth League House, St. Stephen's House, and the North End Union. Men have been supplied as teachers in various clubs and societies, and served in groups concerned with Christian missions. Volunteers have visited hospitals. Twice a year conferences are held of men actively engaged in charity work. In the Fall and Spring the Committee has regularly made collections of discarded clothing from the students of the University. Excursions are conducted to institutions where students have had an opportunity to observe methods of charity administration. At the beginning of the year a census, as comprehensive as possible, is taken in the College of those students who desire to undertake some kind of volunteer charity work. The number of men actually working under the direction of the Committee cannot be precisely reckoned. It was estimated, however, in the College year 1897-98 that besides the large number of undergraduates who contribute to the support of the Committee, at least one student in every eight of those resident in Cambridge was actively engaged in some form of religious, educational or philanthropic service.

#### THE PROSPECT UNION.

The Prospect Union, a workingman's college in Cambridgeport, about one mile from the University, was organized in 1891. Its aim is to bring into friendly and mutually helpful contact the workingmen of Cambridgeport and vicinity, and the students and professors of Harvard University. The work of the Union consists chiefly in evening lectures and classes; the classes being taught by students from the University. The courses of study cover a wide range of subjects, from the most elementary English branches to French and German, History, Political Economy, the natural sciences, and Mathematics. The members of these classes are workingmen of many nationalities and occupations, of all shades of religious belief—Jew and Christian, Catholic and Protestant—and of every variety of political and economic opinion. The lectures are given at the weekly meetings of the Union, often by members of the University faculty. After a lecture there is always an opportunity, which is freely improved by the workingmen, for questions and general discussion. Instructors and students of the University serve as teachers of classes, as lecturers, as officers and committee men.

The Union has a two-fold usefulness. On the one hand any workingman living in or near Cambridge may, by improving the opportunities the Union offers, acquire such knowledge and mental discipline as the circumstances of his lot have before made impossible to him. He may become a

happier and more useful member of society. With natural, friendly, self-respecting contact with young men from the University, workmen lose the prejudices which ignorance and isolation make inevitable to them. On the other hand, the student-teachers find that by the teaching they themselves are taught. They get almost more than they give. They come to realize the debt of obligation the educated man owes to those less favored than himself. The Prospect Union is an educational, not a charitable institution. Each workman member pays three dollars a year, or twenty-five cents a month. Bulletins describing its work are issued by the Union from time to time. It occupies the old City Hall in Cambridgeport, and in June, 1895, acquired this excellent and ample building as its own property.

### THE SOCIAL UNION.

The Social Union aims to do for Old Cambridge what the Prospect Union does for Cambridgeport. Its advantages moreover are offered to working-women as well as men. The Association building, at 42 Brattle Street, is a centre of growing activity. The Union owns an excellent library and reading room, and has organized boys' clubs, women's clubs, dancing and dressmaking classes, an educational department, and provides social entertainments in Brattle Hall. Of the 500 members of the Union some 200 are registered in the Educational Department, the fifty classes of which are conducted by Harvard students. The courses and the conditions of the work are in general similar to those at the Prospect Union.

### PUBLIC LECTURES AND ADDRESSES ON SUBJECTS TOUCHING RELIGION.

During the year 1899-1900 there have been given many public lectures and addresses on subjects touching religion. Among these may be named the following :—

The Ingersoll Lecture on the Immortality of Man, by Professor Royce

The Duddleian Lecture on Pope Leo XIII., by Professor Toy.

An address before the Graduate Club, by Rev. S. M. Crothers, D.D.

A University meeting in recognition of the dedication of Phillips Brooks House and in memory of Bishop Brooks; addresses by President Eliot, Bishop Lawrence, Rev. C. C. Hall, D.D., Rev. C. A. Gordon, Rev. Endicott Peabody, Professor Peabody.

A lecture in aid of the Prospect Union, on Liberty and Equality, by Mr W. D. Howells.

An address before the Social Psychology Club, on the College Settlement in Boston, by Robert A. Woods.

A lecture on the Talmud, by Dr. Emil G. Hirsch.

The William Belden Noble Lectures, being six lectures on "Ethics in relation to the neighboring Sciences," by Professor Palmer.

An address before the Harvard Christian Association on City Mission Work: its needs and opportunities, by A. S. Pease.

Four lectures on the Teaching of Jesus in its relation to Social Questions, by Professor Peabody.

Two meetings in the interests of Foreign Missions, by the Harvard Christian Association.

A lecture in aid of the Radcliffe Scholarship Fund, on the Battle with the Slums, by Mr. Jacob A. Riis.

A Memorial Service to commemorate the sons of Harvard who fell in the Civil War.

A Conference of the Divinity School each Wednesday; and a service with preaching in the Divinity Chapel each Friday evening throughout the year.

## COURSES OF STUDY CONNECTED WITH RELIGION.

Among the many regular courses of instruction in the University which deal with subjects closely connected with religion may be mentioned the following. Courses of a specialised or professional character are not mentioned. The various Announcements issued by the University give all details of days and hours.

### OLD TESTAMENT.

[Consult the Programme of the Semitic Department.]

Babylonian-Assyrian History.—Contact of the Babylonians and Assyrians with the peoples of the Mediterranean coasts and islands.—Diffusion of the Babylonian-Assyrian culture through the medium of the Phœnicians. Professor Lyon.

History of Israel, political and social, till the death of Herod the Great. Professor Lyon.

History of pre-Christian Hebrew Literature. Professor Toy.

History of the Hebrew Religion, with comparison of other Semitic religions. Professor Toy.

History of the Bagdad Califate.—Mohammedanism in Egypt and India.—Mohammedan Law.—The Crusades.—Lectures on the Literature.—The Korān. Professor Toy.

### NEW TESTAMENT.

[Consult the Programme of the Divinity School.]

New Testament Times.—The political, social, moral, and religious condition of the world when Christ appeared. Professor Thayer.

New Testament Introduction.—The origin, contents, and history of the New Testament writings, together with the formation of the Canon. Professor Thayer.

Outline lectures on theological encyclopædia and literature; the characteristics of the New Testament Greek; the Septuagint; textual criticism; study of the Gospels. Asst. Professor Ropes.

The Teaching of Jesus as contained in the Synoptic Gospels. Asst. Professor Ropes.

The Synoptic Gospels, with special reference to the Synoptic Problem. Asst. Professor Ropes.

The Gospel and Epistles of John. Professor Thayer.

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## APPENDIX D

PRESIDENT NICHOLAS MURRAY BUTLER, (COLUMBIA UNIVERSITY,  
NEW YORK CITY), ON RELIGIOUS INSTRUCTION AND ITS  
RELATION TO EDUCATION.\*

a) We may approach the analysis of our civilisation, or spiritual environment, from many different points of view, and perhaps more than one classification of the results of that analysis may be helpful. The classification which I suggest \* \* \* is a fivefold one. It separates civilisation into man's science, his literature, his art, his institutional life, and his religious beliefs. Into one or another of these divisions may be put each of the results of human aspiration and of human achievement. Education must include knowledge of each of the five elements named, as well as insight into them all and sympathy with them all. To omit any one of them is to cripple education and to make its results at best but partial. A man may be highly instructed and trained in science alone, or in literature, or in art, or in human institutions—man's ethical and political relationships—or in religion, but such a man is not highly educated. He is not educated, strictly speaking, at all, for one or more of the aspects of civilisation are shut out from his view, or are apprehended imperfectly only and without true insight.

If this analysis is correct, and I think it is, then religious training is a necessary factor in education and must be given the time, the attention, and the serious, continued treatment which it deserves. That religious training is not at the present time given a place by the side of the study of science, literature, art, or of human institutions, is well recognized. How has this come about? How are the integrity and completeness of education to be restored?

The separation of religious training from education as a whole is the outgrowth of Protestantism and of democracy. A people united in professing a religion which is ethnic or racial, or a nation giving adhesion to a single creed or to one ecclesiastical organisation, always unite religious training with the other elements of education and meet no embarrassment or difficulty in so doing. During the undisputed dominance of the Roman Catholic Church in Europe, education not only included religious training as a matter of course, but it was almost wholly confined to religious training. Theology was the main interest of the Middle Ages, and the theological interest caused religious training to permeate and subordinate whatever instruction was given in other subjects. Music was taught that the church services might be well rendered. Arithmetic and astronomy were most useful in fixing the church festivals and the calendar. With the advent of the Protestant Reformation all this was changed. Religion was still strenuously insisted upon as a subject of study, but the other subjects of instruction became increasingly independent of it and were gradually accorded a larger share of time and attention for themselves alone.

Protestantism, however, would not by itself have brought about the secularisation of the school as it exists to day in France and in the United States. Democracy and the conviction that the support and control of education by the state is a duty in order that the state and its citizens may be safeguarded, have necessarily forced the secularisation of the school. Under the influence of the Protestant Reformation and that of the modern

\* Extracted: (a) from the *Educational Review* (New York), Dec., 1899, and (b) from the *Educational Review* (New York), June, 1901.

scientific spirit, men broke away from adherence to a single creed or to a single ecclesiastical organisation, and formed diverse sects, groups, parties, or churches, differing in many details from each other—the differences, I regret to add, being far more weightily emphasised than the more numerous and more important points of agreement. When the state-supported school came into existence, this state of religious diversity found expression in dissatisfaction with the teaching, under state auspices, of any one form of religious belief. The first step toward the removal of this dissatisfaction was to reduce religious teaching to the lowest possible terms; and these were found in the reading of the Bible, the recitation of the Lord's Prayer, and the singing of a devotional hymn at the opening of the daily school exercise. But even this gave rise to complaint. Discussions arose as to whether a single version of the Bible must be used in these readings, or whether any version, chosen by the reader, might be read. A still more extreme view insisted that the Bible itself was a sectarian book, and that the non-Christian portion of the community, no matter how small numerically, were subjected to violation of their liberties and their rights, when any portion of the public funds was used to present Christian doctrine to school children, even in this merely incidental way. The view that the state-supported schools must refrain absolutely from exerting any religious influence, however small, is one which has found wide favour among the American people. It has led to more or less sweeping provisions in State constitutions and in statutes against sectarian instruction of any kind at public expense. A judicial decision on this subject of great interest and of far-reaching importance is that rendered in 1890 by the Supreme Court of Wisconsin, in the case of the State *ex rel.* Weiss and others *vs.* the District Board of School District No. 6 of the city of Edgerton.\* In this case the essential question at bar was whether or not the reading of the Bible, in King James' version, in the public schools was sectarian instruction, and as such fell within the scope of the constitutional and statutory prohibitions of such instruction. In an elaborate and careful opinion the court held that reading from the Bible in the schools, although unaccompanied by any comment on the part of the teacher, is "instruction"; that since the Bible contains numerous doctrinal passages, upon some of which the peculiar creed of almost every religious sect is based, and since such passages may reasonably be understood to inculcate the doctrines predicated upon them, the reading of the Bible is also "sectarian instruction"; that, therefore, the use of the Bible as a text-book in the public schools and the stated reading thereof in such schools, without restriction, "has a tendency to inculcate sectarian ideas and falls within the prohibition of the constitution and the statutes of Wisconsin.

In this decision there are some very interesting observations on the general question of religious training and the place of the Bible in education. The court says, for example: "The priceless truths of the Bible are best taught to our youth in the church, the Sabbath and parochial schools, the social religious meetings, and above all, in the home circle. There those truths may be explained and enforced, the spiritual welfare of the child guarded and protected, and his spiritual nature directed and cultivated, in accordance with the dictates of the parental conscience." Judge Orton, in a supplementary opinion, adds: "[The schools] are called by those who wish to have not only religion, but their own religion, taught therein 'Godless schools.' They are Godless, and the educational department of the government is Godless, in the same sense that the executive, legislative, and administrative departments are Godless. So long as our Constitution remains as it is, no one's religion can be taught in our common schools."

The Supreme Court of Wisconsin has in this decision given forcible, definite expression to the view held by the large majority of American citizens, and has clothed that view with the authority of law. It is in this sense and for substantially the reasons adduced in the decision which I have quoted, that the American public school is secular and that it can

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\* *Wisconsin Supreme Court Reports*, 76 : 177-221.

give and does give attention to four of the five elements of civilisation which I have named—science, literature, art and institutional life—but none to the fifth element—religion. \* \* \*

My argument thus far has aimed to make it clear that religious training is an integral part of education, that in this country the State school does not and cannot include religious training in its program, that it must therefore be provided by other agencies and on as high a plane of efficiency as is reached by instruction in other subjects, and that moral and civic training is no possible substitute for religious teaching. The agencies at hand for religious teaching are the family and the church, and, in particular, the special school, the Sunday-school, maintained by the church for the purposes of religious training.

The Sunday school is in this way brought into a position of great responsibility and importance, for it is, in fact, a necessary part of the whole educational machinery of our time. It must, therefore, be made fully conscious of the principles on which its work rests and of the methods best suited to the attainment of its ends.

The Sunday-school must, first of all, understand fully the organization, aims, and methods of the public schools ; for it is their ally. It must take into consideration the progress of the instruction there given in secular subjects, and must correlate its own religious instruction with this. It must study the facts of child life and development, and it must base its methods upon the actual needs and capacities of childhood. It must organize its work economically and scientifically, and it must demand of its teachers special and continuous preparation for their work. It must realize that it is first and above all an educational institution and not a proselytizing one, and that the inherent force of the truth which it teaches far greater than any attempted bending of that truth to special ends. It must cease to be merely a part of the missionary work of the parish, and become a real factor in the educational work of the community. It must give more time to its work, and the traditional division of time on Sunday will have to be gradually readjusted in order to make a serious Sunday-school session possible. A Saturday session may also be planned for. It must recognize that ordinarily no single parish or congregation can make proper provision for the religious training of all the young people under its care. The very largest parishes and congregations may be able to maintain a fully-equipped Sunday-school for children from five to eighteen, but the smaller parishes and congregations in towns and cities must learn to combine for their common good. Each parish or congregation may readily and ought always to maintain a Sunday-school of elementary grade, but several adjoining parishes or congregations must combine in order to organize and support a proper course of religious instruction for children of secondary school age and beyond, say from thirteen to eighteen years. In a whole city, unless it be New York or Chicago or Philadelphia, one, or at most two, training classes for Sunday-school teachers should be sufficient. Furthermore, Sunday-school teachers, like all other teachers, should be paid. They should be selected because of competence and special training ; they should be led to look upon their work not as philanthropy, not even as missionary work, but as something which is larger than either because it includes both, namely, education. The several Christian bodies, as long as they remain distinct, will naturally maintain their own separate Sunday-school systems ; but within any given branch of the Christian church, be it Protestant Episcopal, Presbyterian, Methodist, or other, all of the principles just stated can be applied. Sunday schools so organized could be given the same systematic professional supervision that is provided for the secular schools. Each body of Christians in a given community could have its own Sunday-school board and its own Sunday-school superintendent and staff of assistants. Between some Christian bodies actual co-operation in Sunday-school instruction ought to be possible. For the proper organization and conduct of this religious instruction there must be a parish or congregational appropriation, or better far, an endowment fund, to bear the legitimate cost of religious teaching and its systematic professional supervision.

The Sunday-school course of study must be looked after. It is at

present—I say it with all respect—too exclusively pious. Religion is much more important in civilization and in life than the Sunday-school now teaches. It is more real. It touches other interests at more points. The course of study of the future must reveal these facts and illustrate them. It must be carefully graded and adjusted to the capacity of the child. It must reach out beyond the Bible and the catechism. It must make use of biography, of history, of geography, of literature and of art, to give both breadth and depth and vitality to the truths it teaches and enforces. It must comprehend and reveal the fact that the spiritual life is not apart from the natural life and in antagonism to it, but that the spirit inter-penetrates all life and that all life is of the spirit. The problem, then, is not religion *and* education, but religion *in* education.

This, it may be said, is a radical program, a counsel of perfection. Perhaps so. If so, it will provide something to work toward. It will at least bring religious teaching under the influence of those principles and methods which have of late years so vitalized all secular teaching. It will give to it modern instruments, text-books, and illustrative material.

Before dismissing these suggestions as impracticable, because in part unfamiliar, it is well to face the alternative. It is that religious knowledge, and with religious knowledge a good deal else which is worth saving, will go out of the life of the next generation. What appears important enough to the elder generation to be systematically organized, conscientiously studied, and paid for in a terrestrial circulating medium, will deeply impress itself upon the younger. What is put off with a hurried and unsystematic hour on Sunday will not long seem very much worth while.

Already the effects of the present policy are being seen. To the average college student the first book of Milton's *Paradise Lost* is an enigma. The epithets, the allusions, even many of the proper names, are unfamiliar. This is due to ignorance of the Bible. It is necessary nowadays to know something about Christianity as well as to be a Christian. The study of history and of geography in connection with the spread and development of Christianity is fascinating. The study of biography in connection with the people of Israel and Old Testament history generally, may be made to put plenty of life into much that is now dead facts to be memorized. For older pupils the study of church history, and of the part played by religious beliefs and religious differences in the history of European dynasties, politics, and literature will make it plain how moving a force religion is and has been in the development of civilisation. Such pupils, too, are able to appreciate the Bible as literature if it be put before them from that point of view. It is too often treated as a treasury of texts only, and not as living literature which stands, as literature, by the side of the world's greatest achievements in poetry and in prose.

The heart is the ultimate aim of all religious appeals. But the heart is most easily reached by informing the intellect and by fashioning the will. Knowledge and conduct react on the feelings, and the feelings, the heart (so to speak), are educated and refined through them. This fact will never be lost sight of by any competent religious teacher, and his purpose will never be to amass in his pupils knowledge about religion alone, but to use such knowledge to direct, elevate, and refine the religious feelings and to guide and form conduct into character.

It is along such lines as these that the development of the Sunday school from a phase of parish mission work into an educational institution of co-ordinate rank with the secularized school, must take place. There are numerous local problems to be solved, no doubt, and not a few practical difficulties to be overcome, but if the ideal be once firmly grasped and the purpose to reach it be formed, the result cannot be doubtful.

(b.) In the United States \* \* \* \* public education is unrestricted and universal, and wholly secular. It can never be made otherwise. Here, therefore, the problem \* \* \* \* may be stated thus, Shall the state aid with its funds schools other than the present public schools—schools, that is, maintained primarily for the purpose of including a specific type of religious teaching in the curriculum? A single line giving power to the board of education to appropriate public money to private



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schools recently found its way, though plainly unconstitutional, into the revised charter of New York City, and such a storm of protest was raised that it was taken out again in a hurry. There is little reason to doubt that a similar proposal in any other State would have a similar reception. But—and this is the point which is so often overlooked—the question of religious instruction in education remains unsolved.

Nor is the situation helped by reducing religion to a type of ethics, as some propose. Religion is not only faith, but dogma; not only conduct, but worship; and to identify it with ethics is not to simplify the matter any, but rather to complicate it by adding a new variety of religion which must be provided for.

From our point of view, only two lines of action are at all possible: (1) to take the view held by many Roman Catholics and Lutherans, that the school itself must be religious, not secular, and that religious schools should be state-aided; and (2) to take the view that education transcends the school, and so while the school may remain secular, its work must be supplemented, if education is to be complete, by religious instruction to be given by other educational agencies, notably the family and the Church. The alternative is to destroy the completeness of education by omitting religion altogether.

Of the two possible lines of action named the latter is, in our view, the preferable one. It recognises the function and also the limitations of the school, and provides for the active interest and co-operation of two other supremely important educational factors, the family and the Church. Education is, of course, a unitary process, but it is no less unity because several agencies co-operate in it. The former view runs counter to some of the deepest-seated convictions of the American people, and also mistakes, it seems to us, the proper educational function of the school. It is for these reasons that we do not believe that this view can prevail or that it ought to prevail. It must be said, however, that it gains sympathy in some quarters from the fact that Protestant churches are as a rule shockingly lacking in any appreciation of their educational responsibility, and also, apparently, in any capacity to rise to it.

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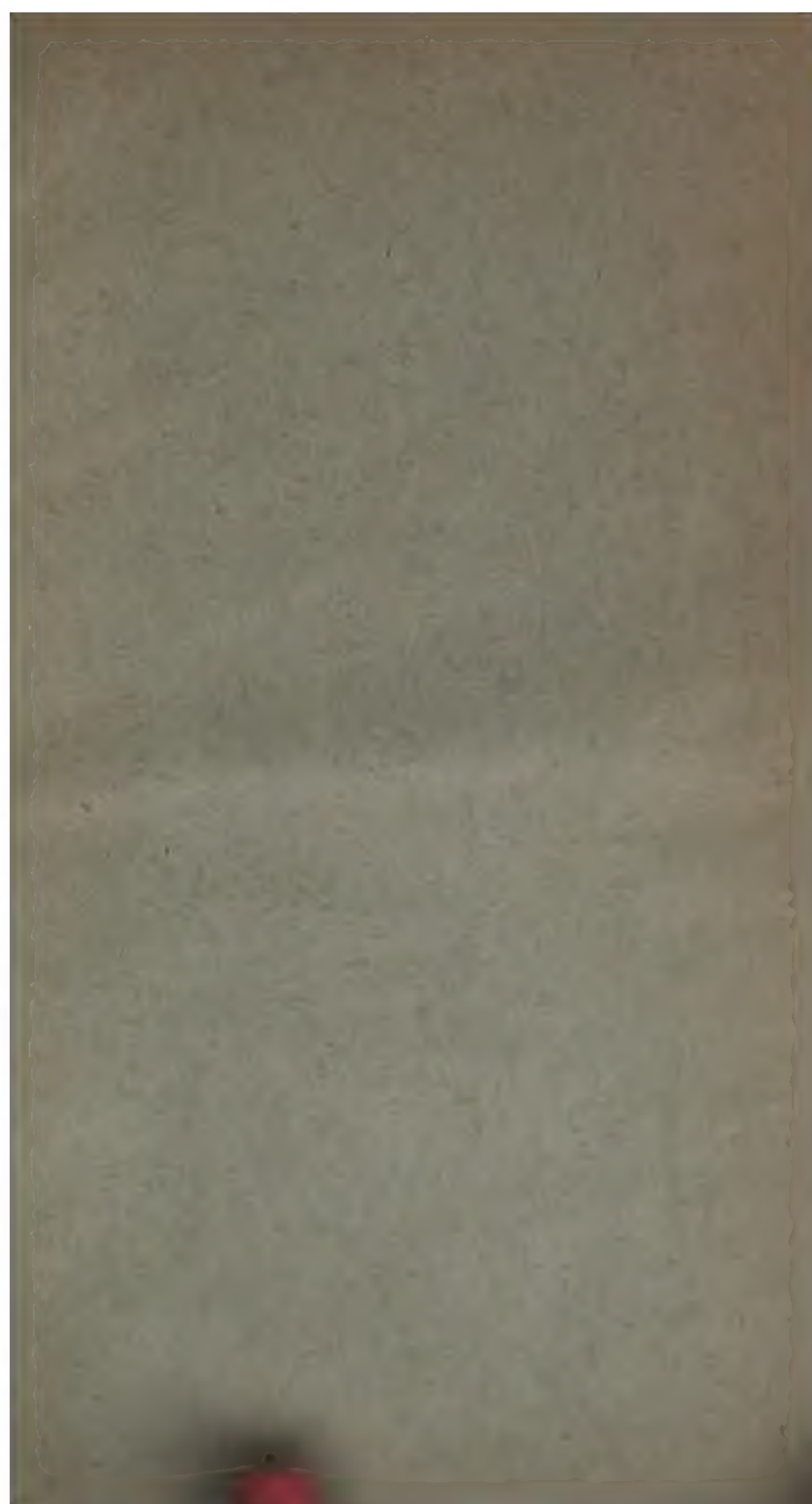
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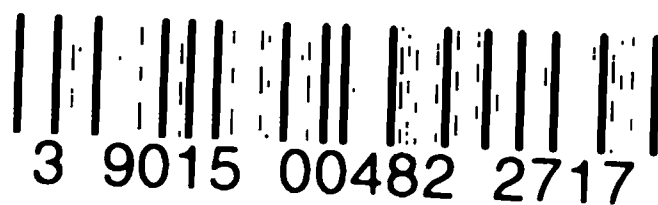
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